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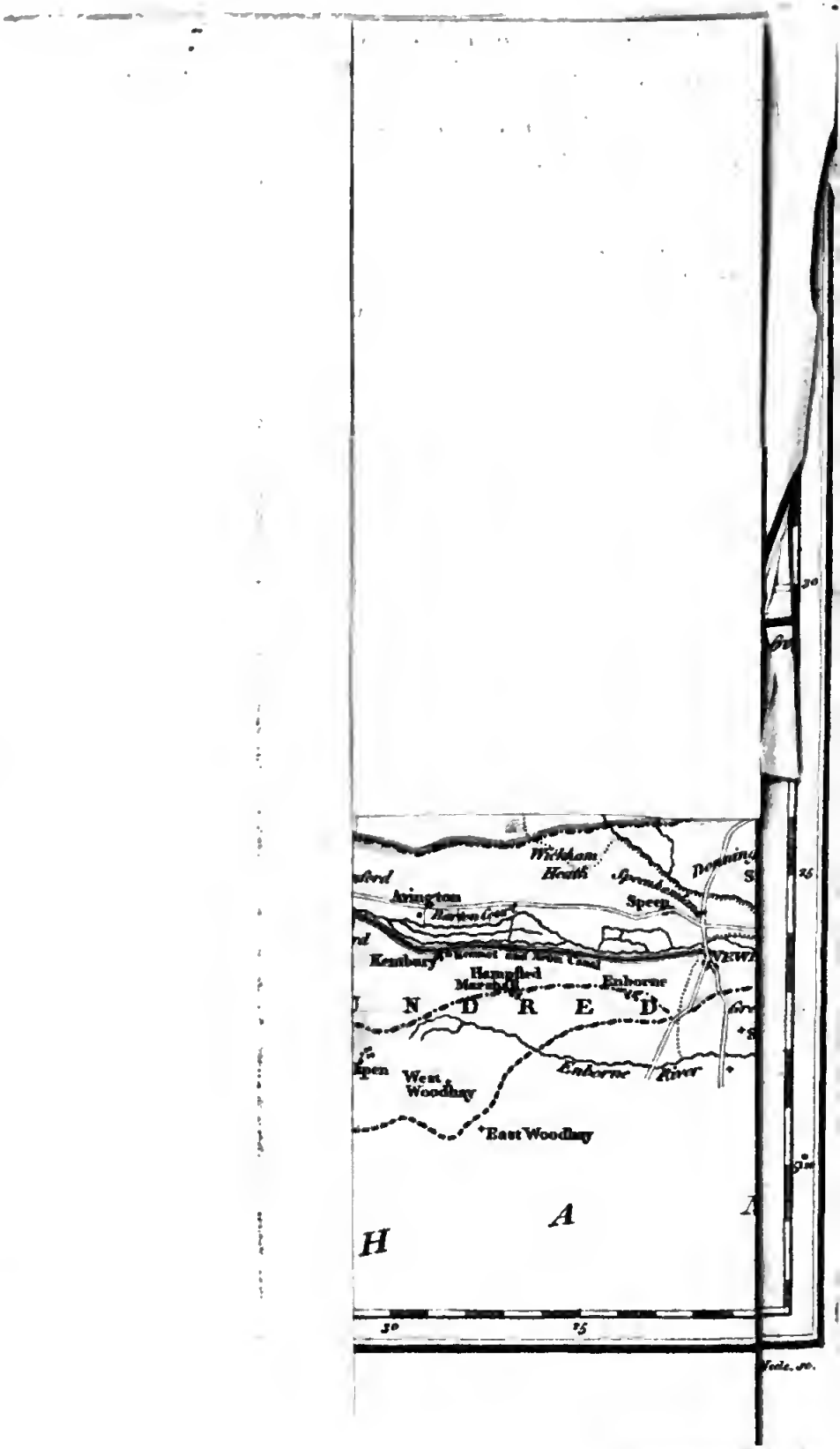
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GENERAL VIEW

OF THE

AGRICULTURE

OF

BERKSHIRE.

DRAWN UP FOR THE CONSIDERATION OF

THE BOARD OF AGRICULTURE

AND INTERNAL IMPROVEMENT.

BY

WILLIAM MAVOR, LL.D.

"Nihil est Agricultura melius, nihil uberius, nihil dulcius, nihil homine libero dignius."—Cic. de Offic.

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1809.

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ADVERTISEMENT.

It is now upwards of three years since the Report of Berkshire was delegated to me; and I feel that some apology is due to the Honorable Board of Agriculture and to my numerous friends, for this apparently long delay. Had not ill health clouded many of the intervening days, had not various avocations, as well as the duties of an active profession occupied many more, the undertaking would probably have been completed in a much shorter space.

This, however, I can aver, that though I have been almost wholly engaged for the last eight months in arranging and drawing up the materials, previously collected, I could have spent as many more on the composition, before I could have pleased myself.

It was my attachment to Berkshire, and my wish to oblige a most respectable and kind friend,* that first induced me to enter into this engagement. To that friend, who was ever ready to encourage my endeavours, to obviate my difficulties, and to satisfy my doubts, this Report owes whatever merit it may be found to possess. Should

* Edward Loveden Loveden, Esq. M.P. one of the Vice-presidents of the Board.

I have unfortunately failed in doing some degree of justice to the subject, let the fault be ascribed to my own want of knowledge, not to my want of industry and zeal.

For the County, which has been the scene of my present labours, I had long borne a partial regard; and I have every reason to retain my attachment, now that I know it better. To its gentry and yeomanry in general, I can only express my gratitude for their kindness, and assure them that the impression of it will be indelible. Particular acknowledgments in this place would be ill timed, where so many have claims to receive them; but I cannot withhold my best thanks from Frederick Page, Esq. of Newbury, for the valuable information with which he favored me on the subject of the Berkshire Navigations; and for his readiness to assist my enquiries, in every way that his extensive local knowledge could suggest.

W. M.

Woodstock.
November 20, 1808.

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ERRATUM.

Page 49, line 12, for 500,00*l.* read 550,000*l.*

AGRICULTURAL SURVEY

OF

BERKSHIRE.

CHAP. I.

GEOGRAPHICAL STATE AND CIRCUMSTANCES.

SECT. I.—SITUATION AND EXTENT.

BERKSHIRE, one of the most beautiful and interesting counties in England, extends from 51° 19′, to 51° 48′ north lat.; and from 34½′, to 1° 43′ west long. Measuring on the same parallels, its extreme length from Old Windsor to Buscot is about 48 miles; and its extreme breadth, from Wytham to Sandhurst, is about 29 miles. Its circumference is nearly 208 miles.

On the north it is bounded by the Thames, which divides it from Oxfordshire on the westward, and Buckingham on the eastward; on the east by the Thames, which separates it from Bucks, and by part of Surrey; on the south by Surrey and Hampshire; and on the west by Wilts, and a small portion of Gloucestershire.

From the meanders of its northern boundary, the figure of this county is extremely irregular, and therefore incapable of being described. In a straight line

from the Thames, in the parish of Wytham, near Oxford, to Sandleford, near Newbury, it measures upwards of 28 miles; in a line from Reading to the Hampshire border, it is barely seven; and at the eastern extremity, less than four miles in breadth. In most parts, Nature indeed has assigned boundaries to Berkshire, which are highly picturesque. The Thames has already been mentioned: the Surrey and Hampshire hills in other quarters, delight the eye. In the latter county, the range called the Hogsback, forms a charming back ground for many miles, to the traveller along the Bath road, from Hungerford to Theale. From the commanding eminences in Buscot park, the landscapes over Oxfordshire, Gloucestershire, and part of Wilts, are highly attractive. At the other extremity of the county, the extensive and diversified views from Windsor and its environs, are too well known to require any description. Other striking internal scenes and situations will be noticed under their proper head.

Berkshire, like most other counties, has its insulated parts; and on the other hand is intersected by tracts belonging to the neighbouring provinces. The parishes of Shilton and Langford, in a line with Faringdon, are wholly surrounded by Oxfordshire, and one side of the street of the village of Great Barrington, in Gloucestershire, and half Lord Dynevor's seat adjoining, by a singular distribution, belong also to this county; while Wiltshire, in particular, is so much intermixed with Berks, in several parishes in the direction of Oakingham, that some confusion, and certainly much inconvenience must occasionally arise from this circumstance.*

It

* In some insulated parts of this county, the church stands in a different county; and as the names of persons liable to serve in the militia are not,

It does not, however, enter into our plan to account for such irregularities, which has already been done in a satisfactory manner by some able antiquaries.

Rocque's map of Berkshire, published in 1761, to the general accuracy of which we are ready to bear evidence, gives 438,977 acres* as the superficial contents of this county; but the learned and inquisitive Dr. Beeke, rector of Ufton, and professor of Modern History in the university of Oxford, to whose liberality and promptness of communication the writer of this Report is sensibly obliged, though he adopts Rocque's† measurements as the basis of his calculations, from astronomical observations which have settled the longitude of Oxford, and the trigonometrical survey by government, makes Berks, including its insulated parts, to contain about 464,500 acres, according to the following distribution:

	Acres.
Arable land about - - -	255,000
Meadows and dairy land in the vale	72,000
Carry over	327,000

not, in conformity to the act, be put up on the church door, the parishioners have hitherto been screened from participating with their fellow subjects in the necessary service of the state. A clause declaring that notice on the door of the church which the parishioners attend, whether in the same county or not, would be sufficient for the purpose, and would put an end to this unfair exemption.

* Under POPULATION, &c. see the number of acres in each parish, according to Rocque, with some remarks and corrections.

† "Rocque," the professor observes, "makes the area of Berkshire somewhat too large as to geographical extent; but, on the other hand, he considerably under-rates the measure of degrees, and consequently his scale of rules is a little too long, and his calculation in acres too low."

	Acres.
Brought forward	327,000
Sheep-walks, chiefly uninclosed, on the chalk-hills - - - -	25,000
Other dry pastures, parks, &c. -	25,000
Wastes, chiefly barren heaths - -	30,000
Woods, copses, &c. - - -	50,000
Other space, occupied by buildings, courts, fences, roads, rivers, &c. -	27,500
	464,500

With due deference to such an able and accurate observer, I am of opinion, from a personal survey of almost every individual parish in the county of Berks, and from the best information I have been able to procure, that the quantity of woodland is somewhat underrated, and that some of the other divisions are rather too high. This does not, however, in the least affect the grand total of acres, which is perhaps as near the truth as can possibly be expected, and certainly is more to be depended on than any previous calculation. In fact, it corresponds much more than Rocque's, with the Report published by order of the House of Lords, in 1805, in answer to certain queries proposed in the preceding session, relative to the statistics of England and Wales. From this document, which, though given without explanation, and probably without regarding insulated parts, we may presume is founded on accurate general principles, it appears that, "the area of Berks is 744 square statute miles, equal to 476,160 statute acres; the number of inhabitants on each square mile, containing 610 acres, is 147 persons, making a total of 109,368," according to the parliamentary returns.

It may not, however, be improper to give Mr. Pearce's

Pearce's distribution of land in this county, who has implicitly followed Rocque, and therefore has not made an allowance for the different inclosures and alterations which have since taken place, and which are yearly affecting the estimates, by changing the application of land.

	Acres.
The inclosed lands, parks and woods, contain about - - -	170,000
The common fields and downs -	220,000
The forests, wastes and commons -	40,000
Roads - - - -	8,977
	438,977

On this I shall only observe, that though the common fields still occupy by far too large a space, they cannot amount to so much by 30,000 acres at least, as they did when Mr. Pearce made his original report, and consequently that so much is to be added to the inclosed parts. In other respects, according to the data he used, which Dr. Beeke has proved to be incorrect, there seems little reason to object to his general distribution.

SECT. II.—DIVISIONS.

THE *political* distribution of this county is into *Faringdon*, *Wantage*, *Abingdon*, *Wallingford*, *Maidenhead*, *Oakingham*, *Newbury*, and *Reading* divisions; and these are subdivided into the following hundreds and parishes, whose locality can only be ascertained by a good

a good map. To each hundred, as far as I have been able to procure returns, from the clerks to the commissioners, is annexed the amount of the *property*, *assessed* and *land taxes*, for the year 1806, shewing what part of the latter is *redeemed*.

		£.	s.	d.
*Beynhurst hundred.**				
Bisham, parish	Property tax	1477	17	8
Hurley, ditto	Assessed taxes	2840	17	10¼
Remenham, ditto	Land tax	1081	6	0
Shottesbrook, ditto	Of which redeemed	587	6	1
White Waltham, ditto				
Bray hundred.				
	Property tax	1120	16	3
	Assessed taxes	2433	14	7½
Bray, town	Land tax	880	16	0
	Of which redeemed	601	12	10
Charlton hundred.				
Barkham, parish	Property tax	2788	4	0
Early, liberty	Assessed taxes	3160	5	8½
Finchampstead, parish	Land tax	1225	5	11
Shinfield, ditto	Of which redeemed	456	13	4
Swallowfield, ditto				
Whistly Hurst, liberty				

* In the 39th year of the reign of Elizabeth, I find an act of parliament was passed to relieve the hundred of Beynhurst, in cases where there was no voluntary default, from the statute of hue and cry, on account of the penalties to which the said hundred was subject, from the numerous robberies committed on Maidenhead thicket. It likewise appears that the vicar of Hurley, who served the cure of Maidenhead, was allowed, about the same period, an advance of salary, as some compensation for the danger of passing the thicket. The thicket still remains a blot on the agriculture of the county, though not on its morality!

Compton,

Compton hundred.

Aldworth, hamlet
Chilton, village
Compton, ditto
Farnborough, ditto
Ilsley East, township
Ilsley West, parish

	£.	s.	d.
Property tax	1584	2	5
Assessed taxes,	4681	9	11¼
Land tax	1192	6	9½
Of which redeemed	647	9	2

Cookham hundred.

Binfield, parish
Cookham, ditto
Maidenhead, town
Sunninghill, parish

Faircross hundred.

Beedon, parish
Boxford, ditto
Brightwalton, ditto
Brimpton, ditto
Chievely, ditto
Frilsham, ditto
Greenham, tything
Hampstead Norris, parish
Leckhampstead, tything
Midgham, ditto
Marlstone, ditto
Peasemore, parish
Sandleford, tything
Shaw and Donnington, parish
Standford Dingley, village
Speenhamland, tything
Wasing, parish
Welford, ditto

	£.	s.	d.
Property tax	7421	19	
Assessed taxes	5561	9	6¼
Land tax	2831	19	8
Of which redeemed	1787	8	8½

Winterborne,

Winterborne, tything
Wood-Speen and Bagnor, tythings
Yattendon, parish

Faringdon hundred.

		£.	s.	d.
Coxwell, Great, parish				
Coxwell, Little, township	Property tax	3117	17	5
Faringdon, Great, ditto,	Assessed taxes	1673	14	0
Faringdon, Little, parish	Land tax	957	3	1
Langford, ditto	Of which redeemed	462	2	4½
Shilton, ditto				
Hospital, township				

Ganfield hundred.

		£.	s.	d.
Buckland, parish				
Carswell, hamlet				
Charney, ditto	Property tax	3610	13	6
Hatford, parish	Assessed taxes	1680	9	8½
Hinton, ditto	Land tax	1556	17	9
Longworth, ditto	Of which redeemed	376	14	0
Pewsey, ditto				
Shellingford, ditto				
Stanford, ditto				

Hormer hundred.

Bagley Wood, township
Barton, ditto
Besselsleigh, parish
Botley, township
Bradley, liberty
Chawley, ditto
Chilswell, township
Cumner, parish
Grampound, township

Hillend,

	£.	s.	d.
Hillend, township			
Hinksey North, ditto			
Hinksey, South, parish			
Kennington, township			
Norcott, ditto			
Radley, parish			
Seacourt, township			
Shippon, ditto			
Stroud, ditto			
Swinford, ditto			
Sunningwell, parish			
Thrupp-Wick, tything			
Wootton, township			
Wytham parish			
Property tax	5500	18	6
Assessed taxes	3093	15	5¼
Land tax	2822	0	11
Of which redeemed	1104	19	10¾

Kintbury Eagle hundred.

	£.	s.	d.
Avington, parish			
Benham, tything			
Chaddleworth, parish			
Challow, East, parish			
Challow, West, ditto			
Church-Speen, township			
Enborne, parish			
Fawley, ditto			
Hampstead Marshall, ditto			
Hungerford, town			
Inkpen, parish			
Kintbury, ditto			
Letcomb Bassett, ditto			
Letcomb Regis, ditto			
Shalbourn, ditto			
Shefford, East, ditto			
Shefford, West, ditto			
Woodhay, West, ditto			
Westbrook, tything			
Property tax	6411	4	10
Assessed taxes	4: 36	11	8¼
Land tax	2676	0	0
Of which redeemed	859	9	0¾

Lambourn

Lambourn hundred.

Blagrave, township
East Garston, parish
Eastbury and Bockhampton, hamlets
Lambourn, parish
Lambourn, Upper, township

Moreton hundred.

Ashampstead, parish
Aston Tirrold, ditto
Aston Upthorpe, village
Bassildon, parish
Brightwell, ditto
Clapcot, liberty
Dudcote, parish
Hagborne, East, ditto
Hagborne, West, ditto
Harwell, ditto
Moreton, North, ditto
Moreton, South, ditto
Moulsford, village
Sotwell, ditto
Streatley, parish
Upton, township

	£.	s.	d.
Property tax	4673	3	5
Assessed taxes	3449	19	0
Land tax	2681	18	10
Of which redeemed	982	16	2¼

Ock hundred.

Appleford, township
Appleton and Eaton, parish
Drayton, ditto
Draycot Moore, township
Fyfield, parish
Frilford, hamlet

Garford,

Garford, parish
Goosey, township
Kingston Bagpuze, parish
Lyford, township
Marcham, parish
Milton ditto
Steventon, ditto
Sutton Courtney, township
Sutton Wick, ditto
Tubney, ditto
Wittenham, Little, parish
Wittenham, Long, ditto

	£.	s.	d.
Property tax	5395	14	6
Assessed taxes	2645	12	10½
Land tax	2681	1	5
Of which redeemed	880	10	6

Reading hundred.

Beech Hill, tything
Beenham, parish
Blewbury, ditto
Bucklebury, ditto
Cholsey, village
Pangbourn, parish
Sulhampstead Abbots, ditto
Thatcham, ditto
Tilehurst, ditto
Whitley, township

Ripplesmere hundred.

Clewer, parish
Easthampstead, ditto
Winkfield, ditto

	£.	s.	d.
Property tax	1354	15	5
Assessed taxes	4595	9	10
Land tax	990	4	0
Of which redeemed	477	7	5

Shrivenham hundred.

Ashbury, parish
Baulking, hamlet
Bourton, township

Buscot,

		£.	s.	d.
Buscot, parish Coleshill, ditto Compton Beauchamp, do. Eaton Hastings, ditto Fearnham, township Kingston Lisle, and Fawler, townships Littleworth and Thrup, ditto Longcott, ditto Shrivenham, parish Uffington, ditto Watchfield, township Woolstone, ditto	Property tax	5918	12	4
	Assessed taxes	2114	15	9¼
	Land tax	3034	12	7
	Of which redeemed	1263	9	6¼

Sunning hundred.

		£.	s.	d.
Arborfield, parish Newland, liberty Ruscomb, parish Sandhurst, ditto Sandford, township Sunning and Woodley, parish Winnersh, liberty Wokingham, town* Wokingham, parish	Property tax	3231	9	10
	Assessed taxes	3194	19	6
	Land tax	1517	18	10
	Of which redeemed	752	2	6

Theale hundred.

Aldermaston, parish
Bradfield, ditto

* By the operation of the consolidating tax act, Wokingham is put under the jurisdiction of the commissioners for the Amesbury division of Wiltshire, by reason of the parish church being situated in that county, though distant from the body of it nearly forty miles!

Burghfield,

Burghfield, parish
Englefield, ditto
Graizeley, liberty
Hartley Dummer, tything
Mortimer Stratfield, parish
Padworth, ditto
Purley, ditto
Sulham, ditto
Sulhampstead Bannister, ditto
Tidmarsh, ditto
Uſton, ditto
Woolhampton, ditto

Wantage hundred.

Ardington, parish
Charlton, hamlet
Childrey, parish
Denchworth, ditto
Grove, hamlet
Hanney, East, township
Hanney, West, parish
Hendred, East, ditto
Hendred, West, ditto
Lockinge, East, township
Lockinge, West, ditto
Sparsholt, parish
Wantage, ditto

Wargrave hundred.

		£.	s.	d.
Waltham St. Lawrence, parish	Property tax	2161	6	9
Warfield, ditto	Assessed taxes	2892	1	5½
Wargrave, ditto	Land tax	1021	17	2
	Of which redeemed	569	15	0

Abingdon

Abingdon, town of
Helen, Saint, parish
Nicholas, Saint, ditto

Reading, town of
Giles, Saint, parish
Lawrence, Saint, ditto
Mary, Saint, ditto

Wallingford, town of
All Hallows, parish,
Leonard, Saint, ditto
Mary, Saint, the More, do.
Wallingford Castle, extra parish
Peter, Saint, parish

Newbury.
Newbury, town

Windsor, town of.

		£.	s.	d.
Windsor, Old,	Property tax	4243	13	11
Windsor, New	Assessed taxes	5389	3	0
Windsor Castle	Land tax	978	10	0
Clewer, parish	Of which redeemed	438	19	8
Dedworth, hamlet				

The gross amount of the assessment, under the property tax for 1806, was 1,220,352*l.*

The hundreds of Beynhurst, or Bernersh, Bray Cookham, and Ripplesmere, are in the crown. The hundreds of Faircross and Kintbury Eagle are held by lease, from the crown, by Earl Craven; the hundreds of Ock and Moreton, by Mrs. Hucks. The lord of the hundred of Charlton is A. Cobham, Esq.; of Compton, R. Pottinger, Esq.; of Faringdon, — Bennet, Esq.; of Ganfield and Wantage, S. Worthington, Esq.; of Hormer, the Earl of Abingdon; of Reading and Sheale, R. Ben-

R. Benyon, Esq.; of Shrivenham, the trustees of the late Lord Barrington; of Sunning, the eldest son of the late R. Palmer, Esq.; of Wargrave, Lord Braybrooke.

It may further be remarked, that Berkshire has no city, but contains twelve market towns; Abingdon, Reading, Newbury, Windsor, Wallingford, Maidenhead, Oakingham, Faringdon, Hungerford, East Ilsley, Lambourn, and Wantage. The first seven of these are corporations. Abingdon, Reading, Wallingford, and Windsor are parliamentary boroughs, but the first returns only one member. Abingdon and Reading are both considered as county towns. The Lent assizes and the Epiphany sessions are held at Reading; the summer assizes and Hilary sessions at Abingdon; the Michaelmas sessions either at Abingdon or Reading, as the magistrates determine; and the Easter sessions at Newbury. County elections generally take place at Abingdon, particularly for knights of the shire.

Though the *ecclesiastical* divisions of counties do not properly belong to a work of this kind, it may just be observed, that Berkshire lies within the province of Canterbury and diocese of Salisbury. It is subject to an archdeacon, whose jurisdiction is coextensive with the county; and is divided into the four deaneries of Abingdon, Newbury, Reading, and Wallingford. The present number of parishes is one hundred and forty-eight, of which sixty-seven are vicarages, and some few others are donatives. The great tithes of these were almost wholly appropriated to religious houses, and about forty of them are now in lay hands. In the number of parishes are included seven which have parochial chapels subject to a mother church; Tubney and All Saints in Wallingford, whose churches have been destroyed, and the three modern parishes of

North

North and South Hinksey, and Wootton. Besides these are twenty-four chapels of ease. Formerly their number was more considerable.

The four grand *natural* divisions of Berkshire are:

1. The *Vale*, beginning at Buscot and terminating at Streatley. It is bounded by the Thames on one side, and by the White Horse Hills, a continuation of the Chiltern Range, on the other: the soil is generally a rich strong loam, producing abundant crops of cone wheat and beans, &c.

2. The *Chalky Hills*, which run nearly through the centre of the lower part of the county, and are covered with flocks of sheep, having a soil, towards the south and east, well adapted for turnips, barley, and, with proper manuring, for Lammas wheat, artificial grasses, &c.

3. The *Vale of the Kennet*, generally a gravel and light loam, excellently adapted for Lammas wheat, turnips, barley, &c.

4. The *Forest Division*, which commences on the east of the Loddon, and extends the breadth of the county to Old Windsor, containing in different parts all the former varieties of soil, and, except in the poor heathy land on the south, adapted to some one or other of the preceding kinds of produce and application.

In order, however, to adapt the districts more particularly to the nature of the soil, and the mode of husbandry pursued, I shall, without attempting a particular description of each in the sequel, exhibit the general distribution of the AGRICULTURAL SOCIETY of BERKS, on its original establishment in 1794, with some additions and variations of my own.

1. *The Vale district*, extending in a line from west to east, from Buscot, the western extremity of the county,

county, to Abingdon, and from Coleshill, through Longcot, Shrivenham, Challow, Wantage, and Hagbourn, to Streatley, with the lands and parishes lying between those two lines, comprising chiefly the rich vale land, and containing the hundreds of Faringdon, Ganfield, Ock, Hormer, Shrivenham, Wantage, and Moreton.

2. The *Down district*. From Ashbury, through part of Uffington, Kingston Lisle, Letcombe, Farnborough, and Ilsley, to Streatley, and from Lambourn, through Fawley and Farnborough to Ilsley, including all the down land and light chalky soil of Berks, and lying in the hundreds of Lambourn, Compton, and the north parts of Kintbury and Faircross. N. B. Some of the farms on the verge of the downs have a portion of vale as well as upland.

3. The *Lambourn district* includes the parishes lying on both sides of the small river Lambourn, to Newbury, containing the parishes of Lambourn, East Garston, Shefford, Wellford, Boxford, Speen, Donnington, and Shaw, and lying in parts of the hundreds of Lambourn, Kintbury, and Faircross. The soil of this district is variable, consisting of chalk, gravel, and strong loam in different parts. The farms are generally large, and some of them have a portion of water meadow.

4. The *Midland district* consists principally of the parishes of Chaddleworth, Brightwalton, Beedon, Hampstead Norris, Yattendon, Chievely, and Peasemore, lying in the hundreds of Faircross and Kintbury Eagle. This district has no streams or brooks of any consequence, and only a moderate portion of down land, but is nevertheless well adapted for sheep, and the soil in many places is sufficiently fertile, under a good system of management.

5. The *Kennet*, or *Peat district*, consisting of farms lying near the river Kennet, having water meadows, including the parishes of Hungerford, Avington, Kintbury, Hampstead Marshall, Enbourn, Speen, Newbury, Thatcham, and Woolhampton, lying in the hundreds of Kintbury, Reading, and Theale. The soil varies from chalk and flint to gravel and strong loam, exclusive of the peat-land near the river.

6. The *Southern district* lies on the south-west extremity of this county, towards Hampshire, and includes all the lands on the south side of the Kennet to Reading, beginning at Shalbourn, and consisting chiefly of the parishes, or parts of the parishes of Inkpen, Woodhay, Enbourn, Newbury, Sandleford, Brimpton, Aldermaston, Wasing, Padworth, Stratfield Mortimer, Shinfield, &c. within the hundreds of Kintbury, Faircross, Theale, and Charlton. The prevailing soil gravel and loam.

7. The *Eastern district*, including all the parishes between Maidenhead and Reading, bounded by the Thames, and lying on both sides of the London and Bath road, in the hundreds of Sunning, Wargrave, Beynhurst, and Bray. The soil varies from gravel, loam, to flint, chalk, and loam, and is generally good corn land.

8. The *Forest district*, including all the parishes from Oakingham to Windsor, lying within the precincts of the forest, in the hundreds of Cookham, Wargrave, and Ripplesmere. The soil in many places gravelly, in others a strong clay, and in some tracks a blackish ferruginous sand, covered with heath.

SECT. III.—CLIMATE.

In a track of such considerable extent, with a surface and a soil so various, there must be some diversity of climate; but in almost every part of Berkshire, the air is pure and salubrious, and this is more particularly the case on the chalky and gravelly soils which prevail through the greatest part of its limits.

No where indeed can health be better preserved, or sooner recovered, than in many spots of this highly favored county, where, according to circumstances, the air is calculated either to brace by its sharpness, or to relieve the weak organs of respiration by its soft and balsamic qualities. In elevated and exposed situations, especially in the midland parts, along the course of the White Horse Hills, the air is pure, but piercing, and snow frequently lies there when none is seen in the vales; but in more sheltered and champaign spots, the atmosphere is equally exhilarating to the spirits, and salutary to the most delicate constitutions.

In the Vale, as it is distinctively called, where the soil is rich and deep, the winds in most directions blowing over a wide expanse of level country, keep the air from contamination; and the substratum being generally gravel, with little or no stagnant water, the situation is not less favorable for health than the more elevated districts.

About Reading, which may be considered as the garden of the county, near Maidenhead, Oakingham, and Windsor, the gravelly soil gives an additional warmth to the climate, and hence vegetation is nearly a fortnight earlier than in the lower parts of the province. Soil, culture, elevation, and exposure, have indeed such

an influence in quickening or retarding the maturity of the fruits of the earth, as well as in developing some animal energies, that what is commonly ascribed to climate, belongs more properly to them.

The rivers in Berkshire having a pretty rapid fall, are in no essential respect injurious to the air, except from neglect, or the introduction of artificial barriers, which confine the waters; yet fogs and exhalations are frequent on their banks, and prove drawbacks in their immediate vicinity, on the comforts and advantages which they have a natural tendency to confer. The early or the late traveller, who from an eminence views the dwellings on the banks of rivers shrouded in vapours, cannot avoid comparing the atmosphere he breathes, with what must there be felt; but except, after floods, when the fermentation excited by water and scum occasion unpleasant effluvia, it is not found that they materially affect enjoyment, or injure health. Epidemics are by no means frequent in such situations. The quantity of willows and other aquatics planted on the banks of the Berkshire streams, have a powerful effect in correcting the vitiated state of the air, and restoring that equilibrium which is necessary for healthful respiration. They are no less salutary than they are profitable.

On the hilly parts, the attracted clouds fall more abundantly in showers, than in the level districts. This is a wise provision of the Author of nature, in giving rains where they are most required, for the purposes of vegetation. Storms are rarely experienced here, and electrical phenomena seem to be less frequent than in some other parts of the kingdom. It must be confessed, however, that meteorological observations have been little attended to in Berkshire, as far as the writer

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of this could learn; and indeed the science is yet in its infancy. Intermixed with much fanciful theory and ill founded hypothesis, we meet with more real information on this subject in Mr. Williams's book "On the Climate of Great Britain," than in any single work or collective body of observations which has hitherto been given to the public.

SECT. IV.—SOIL AND SURFACE.

Though the substratum of this county may be said to consist, in general, either of chalk and other calcareous matter, or gravel, with portions of clay, at greater or less depths, according to the quality of the soil; yet there is scarcely a parish where the superficial stratum does not vary in such a degree, that to describe with tolerable accuracy, agricultural reports ought rather to be parochial than provincial. The same observation, however, applies to almost every other district in the kingdom, and I introduce it only to obviate objections.

A brief account has already been given in Section II. of the prevailing soils in different districts; but some further details will be necessary, in order to furnish a more distinct idea of the whole, as well as of the surface. To accomplish this, as far as circumstances permit, I shall follow the natural divisions of the county, beginning with the

VALE OF WHITE HORSE.

The Vale, according to general acceptation, includes all that space which lies between Buscot and Streatley, where

where the chalk-hills, which have formed its southern boundary, approach almost close to the Thames, whose sinuous course defines its limits on the north.

Along the banks of this noble river is a fertile but generally narrow stripe of meadows, with a clayey or gravelly substratum, and seldom exceeding half a mile in breadth, from which the land rises in most parts gradually to a line of moderately elevated hills or distinct eminences. About Wittenham they are detached and somewhat conical. Between Oxford and Buscot they run sometimes in short irregular ridges, and sometimes rise in separate eminences, though generally of small height. The substratum of this track is chiefly calcareous grit stone: the surface, stone-brash in many places, and well adapted for turnips, barley, &c.; in others strong loam, producing wheat, beans, &c. In this portion of the Vale, likewise, a stripe of light sandy land extends in a broken, waving, and indented line of different breadths, from the vicinity of Buscot to Cumner Hurst, and partially, in some directions further.

Behind these secondary hills, with a gentle declination to the south, lies the *Vale*, properly so called, of remarkable fertility, producing luxuriant crops of corn and other varieties of wheat, beans, and the different kinds of grain and pulse; and extending from Shrivenham in the west, to Cholsey, or rather Streatley, in the east. On the south, the White Horse hills rise with a bold front, and every where sufficiently mark its limits. The prevailing soil of the Vale is "a* strong grey calcareous loam, which evidently owes its excellence to the intimate mixture of vegetable mould with cretaceous earth." In fact, a considerable portion of it is al-

* Dr. Beeke.

luvial

luvial land; and its fertility differs according to the various proportions of the component materials.

In the western part of this vale the land is chiefly devoted to pasturage, and dairying is carried on to a considerable extent, and with great success. It appears from the Doomsday Survey, that the land was then appropriated to the same purposes as now. At this period, in the parish of Coleshill, consisting of 1,820 acres, only 10 are in culture; and in some other neighbouring parishes, particularly Buscot, Eaton Hastings, Coxwell, Shrivenham, and Uffington, full two-thirds are in grass.

The middle and eastern parts of the vale are generally arable, and may be reckoned among the most productive wheat lands in the kingdom, even where loam mixed with gravel prevail, as is the case about Cholsey. Artificial grasses supply the place of natural in several parishes. In the deeper and more adhesive soils turnips, which are found so valuable in other parts of the vale, are little cultivated, nor indeed is the soil well adapted for them. About the Letcombes, however, and some other parishes immediately under the brow of the White Horse hills, as well as in the calcareous track on the north, turnips, both Swedish and common, are successfully raised.

Some parts of this track are well wooded: the chief timber trees elm and oak; the under-wood hazel, ash, willows and osiers.

From the secondary hills, as I have named them by way of distinction, there are many extensive views, and on this line we find Buscot park, Buckland, Faringdon,* Radley, and Wittenham, which may be enume-

* Faringdon clump, standing on an eminence near the entrance of the

rated among the most commanding situations in the vale, and which, except the last, have seats worthy of the advantages they enjoy.

THE CHALKY HILLS.

These begin on the west, near Ashbury, and bounding the vale in a waving irregular line, sometimes presenting a bold descent, and sometimes gently sloping down to meet the champaign, extend to Streatley on the east, as has been already remarked. At this point it seems as if some convulsion of nature had opened a passage for the Thames through the hills which enter Oxfordshire on the opposite side, and continue their course through Bucks. A connected and collateral ridge, however, re-appears on the Berkshire side of the Thames, towards Wargrave, extending through that parish, Remenham, Hurley, Bisham, and Cookham, from whence they leave this county for Bucks. This last mentioned track has a sufficient superficial stratum of vegetable earth, mixed with chalk, flint, and gravel, to render it good corn and sheep land. In the more western parts of the Berkshire hills, their abruptness towards the vale, as well as their general deficiency of soil, render them unfit for agriculture, but they form excellent sheep-walks, being covered with a fine turf. The hollows

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the town from Oxford, used to be a distinguished landmark for many miles, and might justly be called the most attractive spot in the vale. The large trees in its centre were lately consigned to the axe, and nothing now remains but an outer circle of firs, which were planted by the present laureate, who has thus bequeathed a legacy to his native county that Goths and Vandals would spare.

are

are called *cooms*,* evidently the same as the Welch *cwm*, a coincidence rather remarkable, as the languages are so dissimilar. Among these, many sweetly sequestered spots are to be found; but there is a general deficiency of water, and also of wood, except in a few spots. The downs are chiefly composed of a blackish light earth.

On the south side, these hills throughout their whole extent gradually descend to the vale of the Kennet, and contain some intermediate tracks of considerable fertility, of flint, chalk, loam, and gravel, with occasional beds of clay, but almost wholly with a chalky substratum, which extends on both sides the Lambourn, touches on Hungerford, and keeping at an irregular distance from the line of the Kennet, winds round again to meet the Thames, whose course it pursues, as already observed, as far as Cookham. The chalk, however, in most parts of this track, particularly on the White Horse hills,† is of such a gritty nature, and is so much mixed

* From one of these cooms, in the parish of Ashbury, rise two springs with such force and copiousness, that their united streams, in less than two furlongs, turn a mill, and at no great distance lower down, two more.

† The White Horse hills, a name appropriated to the western division of the ridge, receive their appellation from the figure of a horse cut in the chalk on the steep brow of the hill above Uffington, and occupying about an acre of ground. It faces the north-west, and may be seen, from some points of view, at the distance of twelve miles The inhabitants of the neighbouring parishes had a custom at intervals on Whit Monday, of *scouring the horse*, as it was called, a kind of public festival, probably of Saxon origin, and in commemoration of one of Alfred's victories, when many rural games and sports were exhibited, and different prizes awarded to the victors. This has been discountenanced for nearly thirty years. The writer of this, when quite a youth, attended the last celebration, and has no doubt 20,000 persons were assembled on the occasion.

mixed with extraneous substances, that it is found inapplicable to the purposes of manure, and in some places a bed of rubble, clay, or gravel, lies between it and the vegetable mould.

The sheep-walks are chiefly in the north-western and central parts of this track, and terminate with Ilsley downs on the eastward. The land in other parts, though it maintains a considerable number of sheep, is pretty much in tillage; and by means of folding, and other modes of manuring, produces good crops of corn, artificial grasses, and turnips.

Towards the vale of the Kennet, the country is pretty well wooded. Oak, ash, and hazel prevail; but copse wood is more frequent than standard trees. Some plantations of firs are raising in different parts of this track, with what success time must determine. A gravelly soil, however poor, is most congenial to the pine tribe.

Where the chalk hills approach the Thames, there are many fine beech woods. The scenery from these is often pleasing and picturesque. The road from Streatley to Reading embraces many charming landscapes, while that from Henley to Maidenhead, on account of its greater elevation, commands an assemblage of views that can scarcely be rivalled in the midland counties. The vale of Hurley, with its accompaniments, is eminently beautiful. From the high grounds between Baseldon and Ashampstead, there is likewise a rich prospect of the vale of the Kennet, backed by the Hamp-

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casion. Perhaps another age may see the ceremony revived. Where thousands can participate in an innocent pleasure, the expence of prizes should not be thought great. The festival, if at stated periods of three, five, or seven years, and under proper regulations, would form an æra to the peasantry even in agricultural pursuits, and mark the rotation of crops, or the introduction of any particular improvements.

shire

shire hills; and from the downs, along the ridgeway as it is called, the views over the vale of White Horse and Oxfordshire are replete with variety, and delight the eye by the fertility they disclose.

VALE OF THE KENNET.

Under this division I shall include all that space lying on both sides of the river, between the chalky stratum and the Hampshire borders, and extending in a line from Hungerford, by Newbury and Reading, to the Loddon.

In the soil of the vale of the Kennet gravels predominate, but they vary considerably in their qualities, admixtures, and depths from the surface. On the north side of the river the soil is generally a reddish loam, with a gravelly substratum, easily tilled, and, with proper management, not much inferior in the produce of some kinds of grain to the vale of White Horse. On the south side of the Kennet, between Hungerford and Newbury, the soil is of gravel, loam, and clay near the river; but towards Inkpen, Shalbourn, and West Woodhay, we come to a track of deep, white maumy land, well adapted for the growth of wheat, beans, and oak timber. On the same side, from the vicinity of Newbury to the very extremity of the county, and indeed much further, a track of poor gravelly land commences, with portions of clay, in many places extremely sterile, and producing little but heath. Through this line of coarse and generally uncultivated land, the southern boundary of the county passes. It may be traced on Greenham heath, near Newbury, in Alder-

maston

maston, Ufton, and other parishes within the limit mentioned.

The vale of the Kennet is further remarkable for producing a peculiar kind of peat; and along the whole course of the river from Hungerford to Reading, a distance of nearly thirty miles, this valuable article, both for fuel and manure, is found at intervals in different states of perfection, or has been already exhausted. As the outlet of the Kennet into the Thames at Reading is confined by rising grounds, it is probable that the original channel was too narrow to allow the waters a free efflux, and thus being thrown back, they formed a morass for many miles above the obstruction. We learn likewise, from ancient records, that Windsor forest once extended up the vale of the Kennet to Hungerford, and that this track was disforested by charter, in 1226. Hence it is easy to account for the accumulation of peat, by the action of the water on decayed trees and other vegetable matter.

It should, however, be remarked in this place, for the subject is too important not to be resumed, that this peat is very different in its nature from the fibrous mosses, which grow again, after a certain number of years, from the same causes that produced them at first. Here these causes no longer operate; and therefore when the peat land is once dug out, it must be applied to some other purpose, either to the formation of water meadow or osier beds, according to circumstances and situation. Much is already exhausted, and much more cannot be brought into use, from that bane to all agricultural improvement—the right of commons. The present digging commences within two miles of Hungerford, and is carried on at intervals to Woolhampton, where the stratum approaches close to the Bath road.

Such

Such is the value of good peat land, that Charles Dundas, Esq. M. P. assured me, in making some exchanges of property, forty-two acres of this description belonging to him were estimated at 30,000*l.*

Much oak, and other forest trees, grow in the vale of the Kennet, particularly on its southern bank; and in point of local and natural advantages, this district is not inferior to any in the county.

As the greater part of the land, however, lies low, or with only a gentle elevation from the banks of the river, extensive landscapes are not to be expected. But the views along the vale are in themselves rich and well diversified, and the Hampshire bounding hills, as has been previously noticed, form a back ground of uncommon beauty.

THE FOREST DISTRICT.

Without regarding, in this place, the real boundaries of the celebrated forest of Windsor, which will still "live and look green in song," when interest, policy, or a spirit of improvement may have induced government to dispose of its outskirts, and to inclose and plant the rest, I shall consider the district in which it lies as commencing on the east of the Loddon, and extending to the boundaries of the county towards Hampshire, Surrey, and the Thames, except that portion lying on the banks of the latter, between Wargrave and Maidenhead, which is either chalky, or has a chalky substratum, and has already been described.

The more northern parts of this division, towards Maidenhead, Bray, and Clewer, is gravel, strong loam, and

and clay; in the central parts, about Old and New Windsor, Winkfield, and Warfield, a tenacious clay prevails; and in the southern parts of the forest, sand and gravel. In many spots, however, within these limits, I found a good kind loam, in others a stiff loam mixed with clay; but, except in Windsor Great Park, where draining has been carried on with a royal spirit, and with the happiest success, much of the best land is yet in want of this essential improvement, which alone can meliorate its nature, and render it as productive as it is susceptible of being made.

Where the soil is adhesive, and admits not of easy pulverization, where coarse grass is produced, and waters stagnate, the necessity of draining is obvious, and the example of his Majesty in this, as in every other respect, may be copied with the greatest advantage by all his subjects. To this topic I shall recur with pleasure, under its proper head. Berkshire, distinguished by many other advantages, is pre-eminent in this, that here the King and Father of his country has deigned to take agriculture under his more immediate cognizance and protection, and from the improvements and experiments made under his august direction, has given ocular demonstration to every person who has had the pleasure of seeing his farms, of the wisdom that directed them, and the beneficence from which they originated.

The circuit of the forest, properly so called, includes a circumference of about 56 miles, comprehending the parishes of Arborfield, Barkham, Binfield, Easthampstead, Finchampstead, Sandhurst, Sunninghill, Warfield, Winkfield, Old and New Windsor, and portions of Bray, Clewer, Hurst, Oakingham, and White Waltham. Formerly Hurley, Remenham, White and Lawrence

rence Waltham, with some other surrounding parishes, were within its precincts.

The greatest part of the land within its present limits has been brought into culture; but there are still many considerable wastes, which support only a poor breed of animals, and are in a great measure destitute of trees or plantations.

Windsor Great Park consists of about 3,500 acres, a large portion of which has been reduced to tillage, and the remainder doubled in value within the last ten or twelve years, chiefly by draining. The Little Park contains about 300 acres.

The southern part of the forest district is heathy, and much turf is cut and burnt by the poor, which diminishes the already thin staple of the soil. Here, and on Maidenhead thicket, are the most extensive wastes in the county; for I do not consider the downs as coming under that denomination.

The clay and adhesive soils, of which there are considerable portions, are excellently adapted for oak. Ten times the present quantity of timber might be produced in the forest on half the surface, with judicious and careful management.

The surface of this district is agreeably varied. The views from Windsor terrace are of unrivalled beauty, and the castle itself is worthy of being the favorite residence of the monarch of the only free people on earth. From St. Leonard's hill, and some other spots, the landscapes are well diversified, and of great extent.

These general observations on the soil and surface, combined with what has been said in the preceding section, will, it is hoped, be thought sufficient. In my travelling memoranda I had noted down the varieties

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of soil and surface in every separate parish; but in a work of this limited nature, which, to be useful, must neither be too large nor too expensive, such minute distinctions could not possibly be introduced.

SECT. V.—MINERALS.

It appears to be the established order of nature, that a country fertile on its surface, shall be destitute of mineral treasures in its bosom; and that the most sterile tracks shall frequently be productive of valuable mines.

Berkshire possesses no minerals of considerable value, nor any uncommon variety of curious fossils. The chalk hills in general contain nothing very remarkable, as far as excavations have been made. The substance in general is too much mixed with heterogeneous matter to be applied to any useful purpose; but it is nevertheless found sufficiently pure in some places, particularly in the eastern direction of the stratum, to be dug for manure, and occasionally for building.*

At Catsgrove, near Reading, a stratum of chalk has been found, thirty feet in thickness, below which no experiments have been made in sinking, because a stratum of flint, where the water accumulates, lies immediately

* At Hurley particularly, a farm house, and various farm appendages, with other buildings in different parts of the parish, have been built with alternate layers of chalk and flint. It deserves also to be remarked, that some remains of the abbey of Hurley, and of the ancient chapel, now the parish church, built wholly of chalk, in the reign of William the Conqueror, are still as fresh and sound as if they had been the works of the last century. Chalk, when once indurated by the air, has a remarkable property in resisting the action of the weather.

diately under. Above the chalk is a stratum of sandy clay, of about a foot thick, on which rests a layer of oyster shells, two feet more. Above the shells, is a stratum of sandy clay, one foot and a-half thick; then four feet of greenish sand, and over this three feet of a coarse fuller's earth. Above all, is a very deep bed of clay, fit for tiles and bricks.

Woodward has observed that the same stratum of sand, with oyster shells, is to be found at various depths, from fifteen to twenty-five feet, for two miles round Reading. An inferior kind of ochre, and different species of echini have likewise been discovered here. Fossil shells, indeed, of various kinds, and other marine productions in abundance, are to be seen bedded in the calcareous stratum forming the secondary hills, and which, at some distance, follow the course of the White Horse hills. At Faringdon, in this track, sharks' teeth, and parts of fishes, have been found. When E. L. Loveden, Esq. of Buscot park, ordered a shaft to be sunk to a great depth, in order to find water for family use, a variety of marine exuviæ was discovered. Near Abingdon, astroitæ and other fossils have been found. In the bed of the Wilts and Berks canal, near Becket house, in the parish of Shrivenham, the workmen came to a bed of oysters of large size, and apparently uninjured, except that they had acquired a blackish hue from the clay with which they were surrounded. I opened some of them, but found no vestiges of the animal remaining.

Echini, and other extraneous fossils, have also been found near Oakingham; and bones of animals, and branches of birch trees, in the gravel pits and marshy moss lands in Windsor forest.

Pipe clay is found near Shalbourn; and potter's

clay abundantly at Inkpen, and other places. Shell marl * was noticed in the vale of the Kennet, in 1794, though I have not heard of its being brought into use; and common marl, there is reason to believe, might be dug in various parts.

The Sarsden stones or grey wethers, as the country people call them, are irregularly scattered over the Wiltshire and Berkshire downs. They are pretty numerous in a valley near Ashdown park, in the road from thence to Lambourn, and seem as if they had been showered from heaven in some convulsion of nature, being totally unconnected with the soil on which they lie, which is here chalky; whereas, towards Compton

* Extract of a Letter from A. Gordon, Esq., of Kirkcudbright, to Sir J. Sinclair, Bart., President of the Board of Agriculture, dated April 29, 1794.

"In conformity to my promise, I take up the pen to give you an account of my journey to Berkshire, however unfit I may be to write any thing deserving your attention.

"Immediately on my going upon the meadows near Hungerford, I saw symptoms of shell marl; and mentioned my observation at Barton Court, where I dined with Mr. Dundas, and met with several gentlemen of that neighbourhood, none of whom had heard of any marl in that part.

"Next day I examined the meadows from Hungerford to Barton Court, and hope I have made sufficient observations to enable me to introduce the watering of meadows in Galloway. I then viewed the mosses (peat land), and shall, on my return home, commence burning peat for ashes for manure; and expect I have thus successfully accomplished the two objects of my journey. It gives me also satisfaction to know that I have, in return, discovered shell marl, a manure unknown in that part; but perfectly adapted to many fields of dry gravel and small flints which I walked over, upon which the effects of the marl, if properly applied, would very much surprise the farmers. I picked up, in Mr. Dundas's mosses, pieces of three different kinds of shell marl, one of which is of a most excellent quality, and I doubt not there are great quantities of it. It should be spread on grass, and not ploughed up till the second year."

Beauchamp,

Beauchamp, where they are likewise found, it is clayey. The Honorable Daines Barrington has made some observations on these stones in the Archæologia.* They are composed of a fine siliceous grit, and are frequently blasted with gunpowder, and used for pitching; but they resist the mason's tools.

The most remarkable mineral substance, however, is peat, which has already been mentioned, as almost exclusively appropriate to the vale of the Kennet; though it is partially found in other districts, and might every where be converted to good purposes.

This peat may be defined in Mr. Kirwan's words, as "a stratification of fossil trees in all directions, mixed with a reddish or brownish red slimy moss, formed of the carbonic particles of vegetables, and united with their astringent juices, and calorific oleaginous fæculæ." This stratification lies from one to six feet under the surface of the marsh or meadow, the superincumbent strata being either clay, sand on gravel, small shells, or a calcareous alluvial deposition, provincially termed *maum;* frequently also a thin stratum, not exceeding a quarter of an inch in thickness, of a fine white quartzose sand, is found mixed with the peat itself. To procure this peat, after draining to the level and clearing the soil above, it is dug out with a peculiar kind of spade, in long pans, not unlike soap. After being spread on the ground to dry, it is in a marketable state, either as fuel for domestic use, or to be burnt into ashes for agricultural purposes.

Having been analyzed by Mr. H. Davy, professor of chemistry to the Board of Agriculture, this peat is found to consist of

* Vol. III. p. 442.

Oxyd of iron - - -	48
Gypsum - - - -	32
Muriat of sulphur and potash -	20
	100

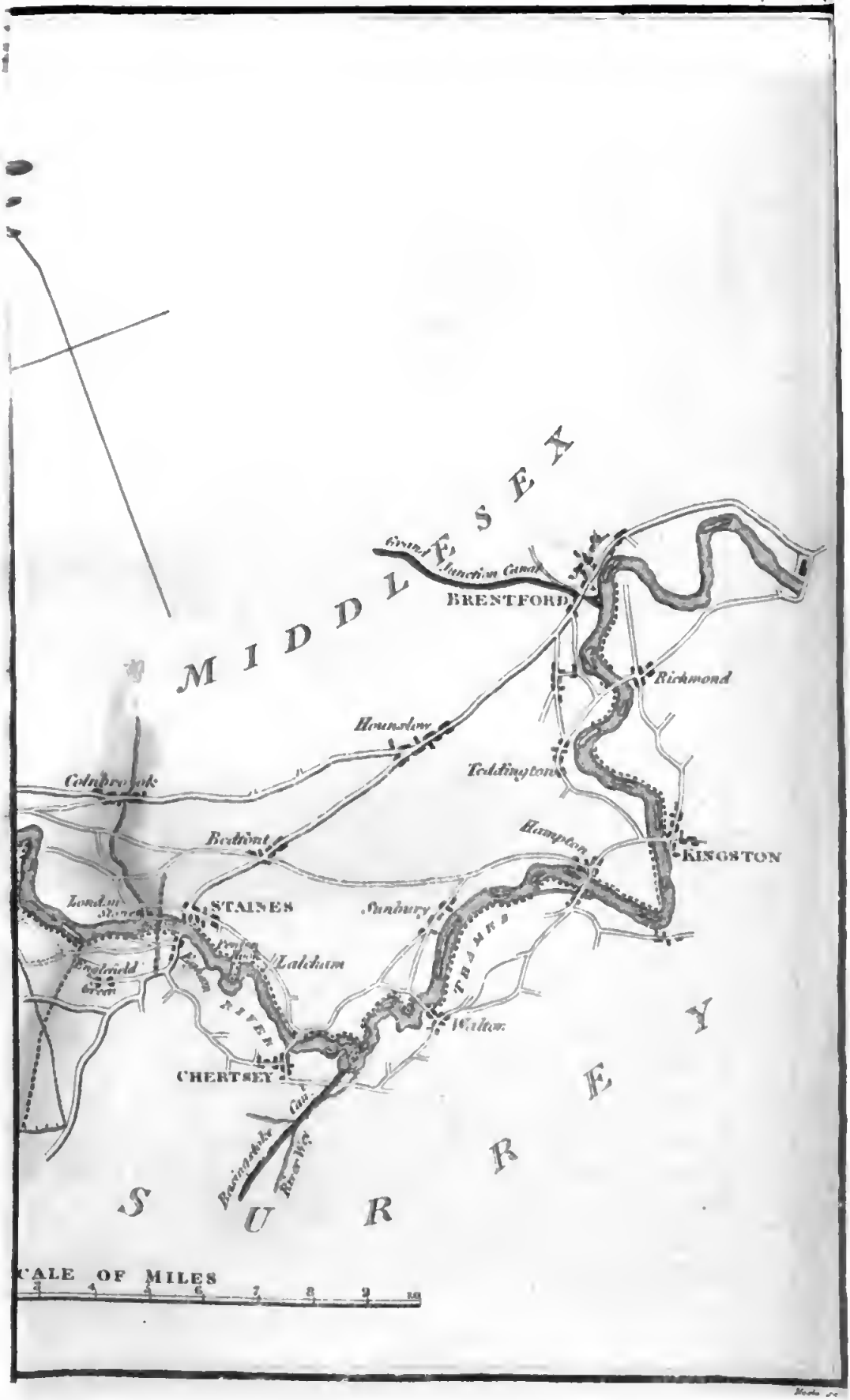
Hence it is obvious, as has been remarked by the very intelligent Secretary to the Board, Arthur Young, Esq., that "where peat ashes are used with the greatest success, there is probably a deficiency of iron in the soil."* Horns, heads, and bones of various animals are occasionally found in the peat.

The mineral waters, hitherto discovered in Berkshire, are equally as unimportant as the mineral substances. At Cumner, near Oxford, is a spring formerly in some repute, which possesses a mild cathartic quality. At Sunninghill, near Windsor, is another of a weak chalybeate nature; but Gorrick well, near Luckley house, in the parish of Oakingham, is strongly impregnated with steel, and has probably some active tonic virtues. Near Winkfield, a spring of the nature of Epsom waters has been mentioned by naturalists, but it seems to be unknown or neglected at present.

SECT. VI.—WATER.

The principal rivers and streams of Berkshire are the Thames, the Kennet, the Loddon, the Lambourn, the Ock, the Aubourn, the Emme, and the Broadwater.

* Bath Society Papers, 1803.


MIDDLESEX
Grand Junction Canal
BRENTFORD
Richmond
Hounslow
Teddington
Colnbrook
Bedfont
Hampton
KINGSTON
STAINES
Sunbury
Laleham
THAMES
RIVER
Walton
CHERTSEY
Basingstoke Can.
SURREY
SCALE OF MILES

THE THAMES.

The Isis, as it is poetically named, near Oxford, but more properly the Thames, is generally reputed to rise at a spring called Thames head, in the parish of Cotes, in Gloucestershire; and after receiving the Churn near Cricklade, in Wiltshire, it re-enters its native county, and flows on by Cirencester to Lechlade, where it becomes navigable, a short way before it begins to form the boundary of Berks, in a circuitous course of nearly 105 miles; being the distance by water from Lechlade to Staines.

This prince of British rivers, in its progress through Berkshire, receives several tributary streams on both sides, which gradually increase its volume; and washes, in this county, the towns and villages of Buscot, Eaton Hastings, Witham, Abingdon, Sutton Courtney, Wallingford, Streatley, Pangbourn, Purley, Reading, Sunning, Wargrave, Remenham, Hurley, Bisham, Cookham, Maidenhead, Bray, Clewer, New Windsor, and Old Windsor, all which lie more immediately on its bank, and participate in the advantages of its navigation.*

The bridges over the Thames connecting Berks with other counties are: St. John's bridge, Lechlade; Radcot, an ancient bridge of three arches, on the road from Faringdon to Witney and Burford; Tadpole bridge, between Buckland and Bampton; New bridge, on the road from Abingdon to Witney; Ensham, a modern bridge of six arches, built in 1777, on the road from

* For the trade, &c. of the principal Berkshire rivers, see Navigable Rivers and Canals, chap. xv. sec. 2.

Oxford

Oxford to Gloucester, in the room of an ancient ferry; Folly bridge, between Oxford and Abingdon; Burford and Culham bridges, over two arms of the Thames at and near Abingdon, on the London road; Sutton Courtney bridge, now erecting of stone, to connect that village with Culham and a populous country on both sides, a communication much wanted, and which will owe its accomplishment chiefly to the public spirit of Francis Justice, Esq., of Sutton Courtney, and of John Phillips, Esq., of Culham; Shillingford, a wooden bridge, on the road from Oxford to Wallingford; Wallingford bridge, on the London road from that town; a wooden bridge between Pangbourn and Whitchurch, built in 1792; Caversham bridge, near Reading; Sunning bridge; Henley bridge, an elegant stone structure, rebuilt in 1787; Marlow bridge, of wood, built in 1789; Maidenhead bridge, from a design of Sir Robert Taylor, rebuilt in 1780; Windsor bridge, a wooden fabric, connecting that town with Eton; and lastly, Datchet bridge. It seems to me that a bridge at Hurley would be attended with several local and public advantages.

In the Thames are many *eyets*, or small islands, provincially pronounced *eights*, generally producing osiers, the *salix vimenalis*. Monkey Island, near Bray, belonging to the family of Bobart, of botanical fame, but formerly in the occupation of the Duke of Marlborough, and now of C. Townley Ward, Esq., contains an elegant villa, and other ornamental appendages, formed at a great expence.

In the Thames are found barbel, pike, trout, eels of an excellent quality, gudgeon, dace, and various other common fish, exclusive of carp and tench, which are probably brought by floods from their breeding places. The number of fishing wiers is injurious to the navigation

navigation of the river; and it might be desirable for the commissioners of the Thames to receive parliamentary powers to purchase them. The average price of fish caught in the Thames is about a shilling per pound. This applies likewise to the other rivers.

THE KENNET.

This river, which rises among the chalky hills near the centre of Wilts, after dividing Berkshire from that county for two miles, enters it at Hungerford, where it is rendered navigable; and passing by Avington, and Kintbury, flows on to Newbury, near which it is joined by the Lambourn. From Newbury it passes through a fertile vale, lined on both sides by populous villages, till it reaches Reading, which it divides, and soon after falls into the Thames in the parish of Sunning, after a course of about thirty miles in Berks.

"The Kennet swift for silver eels renown'd," besides that fish, produces trout, pike, barbel, crayfish, chub, roach, and dace. Barbel is not found west of Newbury. Trout, which are much esteemed for their delicate flavour, have been caught near that town of the enormous length of forty-five inches, and weighing fifteen pounds and upwards. The principal bridges over the Kennet are at Hungerford, Newbury, Aldermaston, and Reading.

THE LODDON.

"The Loddon slow with verdant alders crown'd," and which is the subject of Pope's Fable of Lodona, rises near Aldershot, in Hampshire, and reaching Blackwater, it begins to form the boundary between that county and Berkshire. Passing between Sandhurst and Yately, it enters this county in the parish of Swallowfield, and flowing by that village, and between Shinfield and Arborfield, crosses the Oakingham and Reading road at Loddon bridge, and the Bath road at Twyford bridge, and falls into the Thames, near Wargrave. Its course from Blackwater to its efflux may be about twenty miles.

"The waters of the Loddon and its commnnicating streams abound with eels, pike, perch, roach, dace, gudgeons, tench, and a few carp. The numerous large wheels or bucks which are placed upon every stream, prevent the fish from inhabiting these waters long enough to grow large. Pike of five or six pounds weight are sometimes taken: eels seldom exceed two or three pounds."*

THE LAMBOURN.

This river has its source among the chalk hills above the town of the same name, and running on the left of the road between Lambourn and Newbury, falls into the Kennet near that town, after passing through Bock-

* S. Nicholls, Esq., Hinton house, Hurst.

ington,

ington, Eastbury, East Garston, Great and Little Shefford, Weston, Welford, Easton, Westbrook, Boxford, Bagnor, Donnington and Shaw, in a rapid course of about sixteen miles.

Of this river it has been reported by most topographical writers, that its stream is always full in summer, and that it is almost lost in winter. This phenomenon has been attempted to be explained on the principle of the supposition, that in the hills from whence this small river issues there is a large cavity, with a duct in form of a syphon or crane, which begins to act as soon as the winter rains and snows have filled the cavity, and ceases about the time of their return, for want of a sufficient supply. This solution is easy enough, but the necessity of its application has been doubted. Mr. Lysons says, "By the testimony of persons of veracity and observation residing in the neighbourhood, it appears that little credit is to be given to this tale; but that the truth is, the river preserves during the whole year a pretty equal degree of fulness, being seldom affected by the drought of summer, or subject to inundations in the winter. During the remarkable drought of the summer of 1803, its source was completely dried up."*

This admitted degree of equability, both in summer and winter, contrary to other streams, argues some peculiarity in the Lambourn. From Mr. James Spicer, an intelligent farmer of Lambourn, whom I saw about the end of August, 1805, on my tour through this part of the county, I received the subsequent information, which I noted down at the time. "The small river Lambourn rises from several springs in the sides of the

* Magna Britannia, Vol. I. p. 196.

hills,

hills, which meet between the two Lambourns, receiving several more springs in its progress. It generally gets dry about Michaelmas, and returns about February. About three furlongs from its source, it is sufficiently large to drive a mill in *summer*. At Little Shefford, a distance of about six miles, it is rarely quite dry at any season. The lower down the more constant. It produces plenty of trout where the water is permanent." Philosophical disquisitions do not enter into my present plan; but I should have thought myself wanting in attention and curiosity, had I not noticed the popular phenomenon of the Lambourn. The fish of this stream are nearly of the same kind, but less esteemed than those of the Kennet.

THE OCK.

The Ock rises from some springs near Uffington in the vale of White Horse, and passing near Stanford, Charney Basset, Lyford and Garford, is joined in Hanney Mead by a brook which has its source near Letcombe Basset, and runs by Letcombe Regis and Wantage to Hanney. Having received this tributary stream, the Ock passes between Marcham and Drayton, and falls into the Thames at Abingdon, after a course of about twenty miles. It may be considered as the only principal stream of the vale, though from the shortness of its course it never acquires any considerable size. It drives several mills. The fish it produces are pike, perch, gudgeon, roach, dace, and cray fish; the former are highly esteemed.

THE AUBOURN,

Rises near Inkpen in Berkshire, but soon becomes the boundary between this county and Hampshire; flowing through Newton, it pursues an easterly course till it has passed a place called Hide End, after which it takes a northerly direction, and dividing Berks, runs obliquely between Brimpton and Wasing, and falls into the Kennet, near Aldermaston, after running about seventeen miles.

THE EMME.

This small stream rises near Bagshot rails, and passing Oakingham, falls into the Loddon near Sandford mill.

THE BROADWATER.

This stream which has different sources in the forest district, runs by Benfield, Waltham, and Ruscombe, and falls into the Loddon near Twyford.

GINGE BROOK,

As it is called, rises near the Hamlet of that name, not far from Wantage, and running through East Hendred, Steventon and Milton, falls into the Thames at Sutton Courtney. It drives several mills in its course, and among the rest a paper mill. Other rivulets, brooks, and springs are too insignificant to mention. Some of them, however, drive mills, particularly *Moreton Brook*, which falls into the Thames at Wallingford.

NATURAL

NATURAL AND ARTIFICIAL LAKES AND PONDS, &c.

Exclusive of a few pools of no sufficient magnitude to deserve notice, Berkshire has no natural stagnant waters. Ruscombe Lake, as it is called, is a track of about one hundred acres through which the Broadwater flows, and in winter spreads to the above limits, when pike, perch, and eels are found in it abundantly; but the waters retiring, it becomes dry in summer.

The great lake, and Virginia water in Windsor Great Park, may be considered as artificial sheets. Yet where the position admits, and there is a proper supply of water, such pieces of water are not only to be considered as an ornament, but as productive of an improvement, by draining the surrounding soil, exclusive of the profit arising from fish. Artificial lakes, however, are not very common in Berkshire, because many of the principal seats being built on the banks of rivers, those appendages are less required.

E. L. Loveden, Esq. who erected his elegant mansion of Buscot Park in 1780, and whose various agricultural improvements will be introduced under the proper heads, has two fine pieces of water, which apparently unite, covering thirty-three acres of land, and producing plenty of pike,* eel, carp, tench, perch, trout, &c. The water which supplies them filters through the gentle eminences on the south of the house, and covers the bottoms to the east and west, in a pleasing natural style. Though there is not the smallest brook communicating with his lakes, from the adhesive quality of the soil, the natural springs, and the drainage of the environs, they always stand full.

* Pikes of 18 and 20 lbs. weight have been caught here.

Fig. 1

Fig. 2

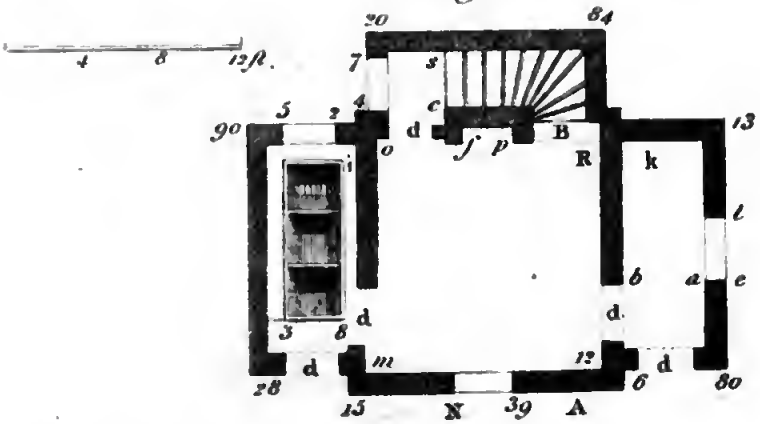
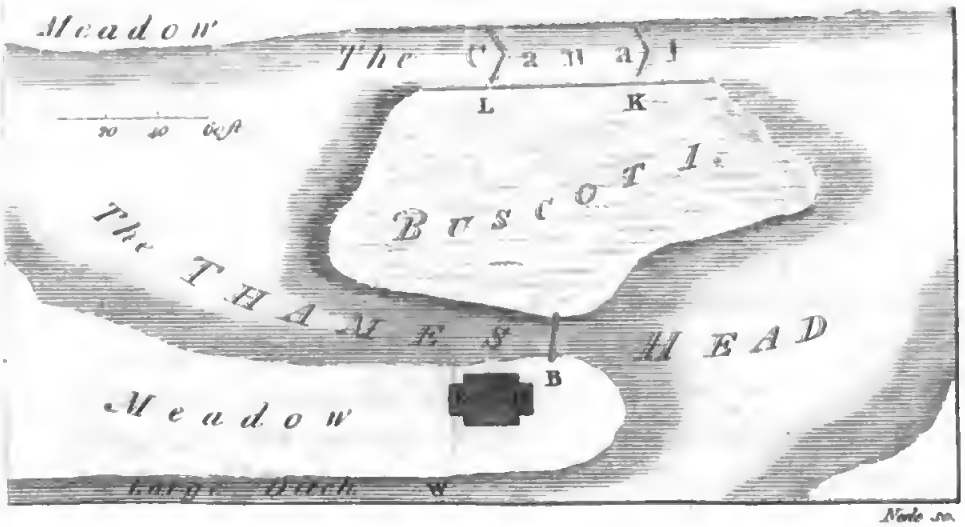


Fig. 3



The same gentleman, finding the well he sunk to a vast depth for the supply of his house, yielded only a brackish water, "determined," to use his own words, "to make a spring." To accomplish this, he employed a very ingenious and successful contrivance, which deserves to be particularised, as it is applicable to many other situations, where a scarcity of water is felt. His seat standing near the very brow of the eminence on which it is built, he had only a superficies of about an acre and a half of grass land in front, from which there was the least descent. A semicircular drain with a mole plough, scarcely perceptible on walking over the ground, in the line of the greatest elevation, communicates with two small iron grates on the side of the gravel drive up to the principal front. All the water which falls on this drive falls into one or other of those grates, between which there is an underground drain, with a very moderate fall to the most westerly, where a channel commences capable of receiving all the water within the compass of the semicircular drain, and which passing through strainers, is conveyed to a large sunk reservoir, in a court to the westward of the mansion; and a pump being placed here, the family is supplied with a pure soft water, no less salutary than useful for every domestic purpose.

While on the subject of water, I must not omit to mention Mr. Loveden's plan of a "fish-house which cannot be robbed." It is built on a small peninsula, surrounded on three sides by a branch from the Thames; and has iron grates to the east and the west, to allow the water a free passage. Within the limits of the building, whose exterior appearance is that of a neat cottage, are three stews, about eight feet deep from the ground floor, and standing on an average

three

three in water, which communicate with each other by holes bored through the wooden partitions. These stews are covered with trap doors, which when locked, even the person who inhabits the cottage connected with them, could not open and get at the fish, without the certainty of detection. Where noblemen and gentlemen of fortune are desirous of having a regular supply of fish for their tables, and at the same time of providing a residence for a dependent, this kind of fish-house may be beneficially erected.

In the parishes of Oakingham, Hurst, Lawrence, Waltham, and Ruscombe, several gentlemen have natural or artificial fish ponds, which are let to tenants, and produce every third or fourth year a crop, if it may be so termed, of carp and tench. The occupier stocks with yearlings about two inches long, obtained chiefly from Yately, on the neighbouring confines of Hampshire. The breeders are about eight or nine pounds weight; but in the Berkshire ponds they are never suffered to breed, but are sold off to the inns at Henley and other places, when the ponds are drawn, which is generally once in four years, and weigh at that age about three or four pounds each. The value of land thus applied, cannot average less than about twenty shillings per acre. Lord Braybrooke, General Gower, C. F. Palmer, Esq. the representatives of the late Richard Palmer, of Hurst and of Holme Park, and the Rev. Mr. St. John, have property of this description.

Anxious to be correct in a produce so unusual in other counties, though I made the usual enquiries on the spot, I applied to S. Nicholls, Esq. of Hinton, House, in the parish of Hurst, for collateral information. The talents of this gentleman are only exceeded by

by his promptitude to oblige, and the general philanthropy of his character. From him, among other valuable matter, I received the following observations on the subject.

"The ponds are regularly laid empty, and the fish with which they are stocked, which are uniformly carp and tench, are taken out every third or fourth year. The pond is afterwards allowed to lie fallow for the remainder of the summer season, and is again stocked early in the ensuing year with yearling fry of the same species. The ponds in this parish are all subject to an abundance of coarse, bony, insipid fish, denominated Prussian or German carp. As the species is carefully destroyed, it is wonderful they should increase with the rapidity and universality which they appear to do: the spawn must be plentiful and singularly prolific. With respect to the profit, it is so variable, according to the varieties of situation, and exposure to the running of yards, and aptitude to receive nutriment from animal or excrementitious matter, that no general estimate can possibly answer your question satisfactorily. Every acre of pond, properly stocked and well situated, must, in my apprehension, produce an annual increase of from eighty to one hundred pounds weight. If artificially fed, the increase will be greater; or less, if the pond is not so situated as to receive manure from the circumjacent lands. By retail, the fish here are generally sold at a shilling per pound; but under particular circumstances, they may sometimes be had as low as tenpence."

Mr. Toomer of Newbury, is famous for producing trout of a very large size in his stews. Not many years ago he had three fish of that species which weighed

weighed fifteen pounds each; two of them had been fattened by himself, the other was of that weight when taken out of the Kennet. At another time he had a trout grew till it attained the weight of seventeen pounds, when it was given to the late Lord Craven, who sent it as a present to his Majesty.

When at Newbury in 1805, I dined in a party who the day before had feasted on a trout weighing 15¼ lbs. and which had been fed in a stew for about eighteen months. It measured 31 inches in length, 20¼ in circumference, and the length of its jowl was 9⅛ inches. A trout of 1½ lbs. has in the space of a year grown in a stew to the weight of 8½. Instances indeed have been known of a trout growing a pound per week.

On the Berkshire downs, and along the whole of the chalky stratum, in elevated situations, water is generally scarce. In the dips, however, there are commonly springs or artificial pools. In the whole parish of Aldworth are only four wells. My friend Mr. Selwood, of Pebworth farm, in that parish, has a well of vast depth, from which water is drawn by means of a jack ass. On the whole, however, the Berkshire farmer is subject to as few inconveniences from a scarcity of water as is common in most of the neighbouring counties.

CHAP.

CHAP. II.

STATE OF PROPERTY.

SECTION I.—ESTATES AND THEIR MANAGEMENT.

If the general division of property is a source of individual energy and national happiness; if that county is ever found to make the greatest improvements in agriculture, where estates are neither too small to be occupied with advantage, nor so large as to occasion a numerous rack-rent tenantry, in these respects Berkshire has claims to pre-eminence, which few of the neighbouring provinces will dispute.

On a moderate calculation, the landed property, including houses, mills, and other productive revenue, arising from, or attached to the soil, cannot amount to less than 500,000*l.* per annum. Of this sum, the largest possessor in the county may probably have about 8000*l.* a year; a few more may have estates to the value of 5, 6, or 7000*l.*; but great land owners are rare, either among peers or commoners: of the former Earl Craven has the largest possessions; of the latter E. L. Loveden, Esq. In the lower part of the county, indeed, property is least divided, though every where we find a respectable number of yeomanry; in the upper part, we see several handsome seats with land not exceeding 100 acres.

In the parish of Winkfield, consisting of nearly 10,000 acres, the largest estate is under 400 acres*; nor is this moderate distribution unusual in many other parishes of Berkshire. Hence, a high spirited and independent yeomanry, actively engaged in agricultural pursuits, and each forming a circle of connection around him, is the distinguishing character of the county. The gradations of society have here no broken links: from the highest to the lowest, there is a gradually ascending or descending scale. In such a state we may look for patriotism without interest, and a display of generous feelings without the dread of offence. It is here that the influence of love can do much; the influence of power or property, little. It was observed on a particular occasion by the late lamented Mr. Pitt, and I quote the *dictum* on the authority of a highly respectable gentleman to whom it was made, "that no minister of this country could command ten votes in Berkshire." This sufficiently marks the independence of the county, and is the highest eulogium that can be paid to it.

It may naturally be supposed that the number of freeholders is very considerable, and there is every reason to believe that it is regularly increasing. Fortunately for the peace of the county, no opportunity has occurred for many years of ascertaining their real amount. Estates, however, are known to be frequently purchased on speculation, and to be sold out again in lots; and entails have been so generally broken, that few families inherit the same estates and occupy the same seats which their lineal male ancestors did two centuries

* Stanlake, Batson, jun. Esq. informant.

ago.

ago. The Cravens, Englefields, Eystons, Reades, Southbys, Seymours, and Clarkes, are among the most ancient of this description, who are still connected with the county. Among the representatives, however, of some very old families, or in the female line, may be ranked the Berties, the Nevilles, the Pleydells, the Puseys, the Throckmortons, Lovedens, Nelsons, and Blagraves.

It is difficult to say, with any degree of accuracy, what may be the present value of freehold estates. An old, or an improved rent, exoneration from tithes or from land tax, the advantages of situation, and the magnitude of the purchase, are all to be taken into the account, and considerably influence the price. According to circumstances, the minimum may be about twenty-six years purchase, and the maximum thirty-five, at a fair nett rent. The average, however, will not exceed twenty-eight years.

As few of the estates are so large as to have the superintendence of them devolved solely on agents, and as many gentlemen of considerable landed property may be ranked among the most zealous promoters and the ablest judges of agricultural improvement, a good system of management is generally prevalent. No estates are better managed and no tenantry are more happy, than where the proprietor at once possesses the knowledge and the inclination to inspect his own affairs. When estates are left wholly to the controul of agents, the connection between the owner and the occupier is dissolved or interrupted: it is the object of the representative to diminish all expences but his own, and of the tenant to remain passive and inactive, provided he can gain a living, and avoid giving offence. It was observed to me by a tenant of a detached estate, belonging to the late Richard Palmer, Esq. of Hurst, a

man whose premature death is a loss to his family, his friends, his dependants, and the public, that the principal request he ever made to his landlord was, "that he might always be allowed to pay his rent to him in person." He knew the value of this intercourse, and I am convinced he spoke the general feeling of respectable tenants.

On the other hand, it is the proudest rank a country gentleman can hold, to live on his estates, and to diffuse happiness around him, by example, by encouragement, and by advice; to be the friend, the father of his dependants, and to grow old among those whom he has known from the earliest dawn of recollection. In cities and at public places, the land owner is frequently eclipsed by the successful votaries of trade and commerce; but on his native domains, he resumes his consequence, and feels the importance of his situation.

SECTION II.—TENURES.

By far the greatest part of the land is freehold, a kind of tenure which possesses the most numerous advantages with the fewest inconveniences.

I have found, however, in different parts of the county considerable portions of copyhold lands, held by different tenures, according to the customs of the respective manors. In some places, the lords are disposed, on equitable terms, to enfranchise their tenants. Lord Kensington has done so at Cholsey *, and the

* "The tenure is copyhold for lives under Lord Kensington, who has given the copyholders an opportunity of enfranchising their estates, subject

practice is to be commended; as holding courts is seldom beneficial to the lord, and is often attended with expences and disadvantages to the tenant.

Among the peculiar customs, which are now grown obsolete, either because the tenants are become more virtuous or the lords more indulgent, may be mentioned that singular one which prevailed at Enborne, a manor belonging to Earl Craven, where the widow of a copyholder, guilty of incontinency or marrying again, lost her freebench or life interest, unless she submitted to the ceremony of riding into the court on a black ram, and of repeating some confessional lines. The forms attendant on this ludicrous display are recorded in the Spectator, and in several law books. After the most diligent enquiry, the steward of the court can find no entry in the existing books of the ceremony having been literally performed; but the jury still present this as one of the ancient customs of the manor, and it is said that a pecuniary fine of 6s. 8d. would now be received in lieu of the penance.

The same ludicrous custom was likewise established in the manor of Chaddleworth, now the property of Richard Walter Nelson, Esq.

In the manor of Great Faringdon, the customary tenant's daughter on being convicted of incontinency was to forfeit the sum of forty pence to the lord, or to appear in court, carrying a black sheep on her back, and making confession of her offence in these words: "*Ecce porto pudorem posterioris mei.*" I do not understand

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subject to a fair value; for which purpose I am going to meet a gentleman from town, to ascertain the value of the land, and settle the terms."—*Letter from W. Bushnell, Esq. Aston Tirrold.*

derstand that either the money or its commutation is now demanded.

In the manor of Hungerford, which belongs to the inhabitants, and of which a constable, annually chosen, is lord, the tenants are still called together by the blowing of a brass horn kept in the town hall, on the second Tuesday after Easter, at the Hocktide court.

Manors themselves, in this county, were sometimes held by singular conditions. The manor of Bockhamptom in the parish of Lambourn, was formerly held by grand serjeanty, by the service of keeping, at the king's charge, a pack of harriers. Another estate in the same parish was held by the serjeanty of carrying the king's horn when he came to hunt within the hundred, and as Blount in his Tenures says: *Custodiendi domina rege sex meretrices ad custum domini regis.*

Leases on lives, and leases renewable every seven years under deans and chapters, and other corporate bodies, are not unfrequent in this county. The misfortune attending them is, that from the frequent recurrence of the fine and its magnitude, the holders are liable to much distress. A large sum on the renewal of a life, or a fine of from one and a half to two and a half years rent, septennially, requires a degree of economy and foresight which are not always found, especially in youth. Diminish the fine, and increase the reserved rent, and the interests of both parties would be consulted.

Some few estates are held by leases of 1000 years: others are leased on single or on three lives, by individual land owners; but this practice is not common, and renewals, where it exists, are generally refused.

I have observed that estates in general under corporate

porate bodies, or on lives, have the buildings in bad repair. The frequent recurrence of heavy fines renders it difficult to save money for improvements.* In general, however, such estates are not too dear, and exaction in public bodies is rare; but there is something radically wrong in the mode of tenure and letting, according to the system now pursued, which might be easily obviated by the plan I have recommended.

The nature of the grants from the crown, in and about Windsor Forest, do not fall under private cognizance.

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* The corporation of Reading have a judicious plan of ordering a survey to be taken of their buildings before they renew a lease, which is refused, till they are put into proper repair. I believe the same practice is observed at Abingdon.

CHAP.

CHAPTER III.

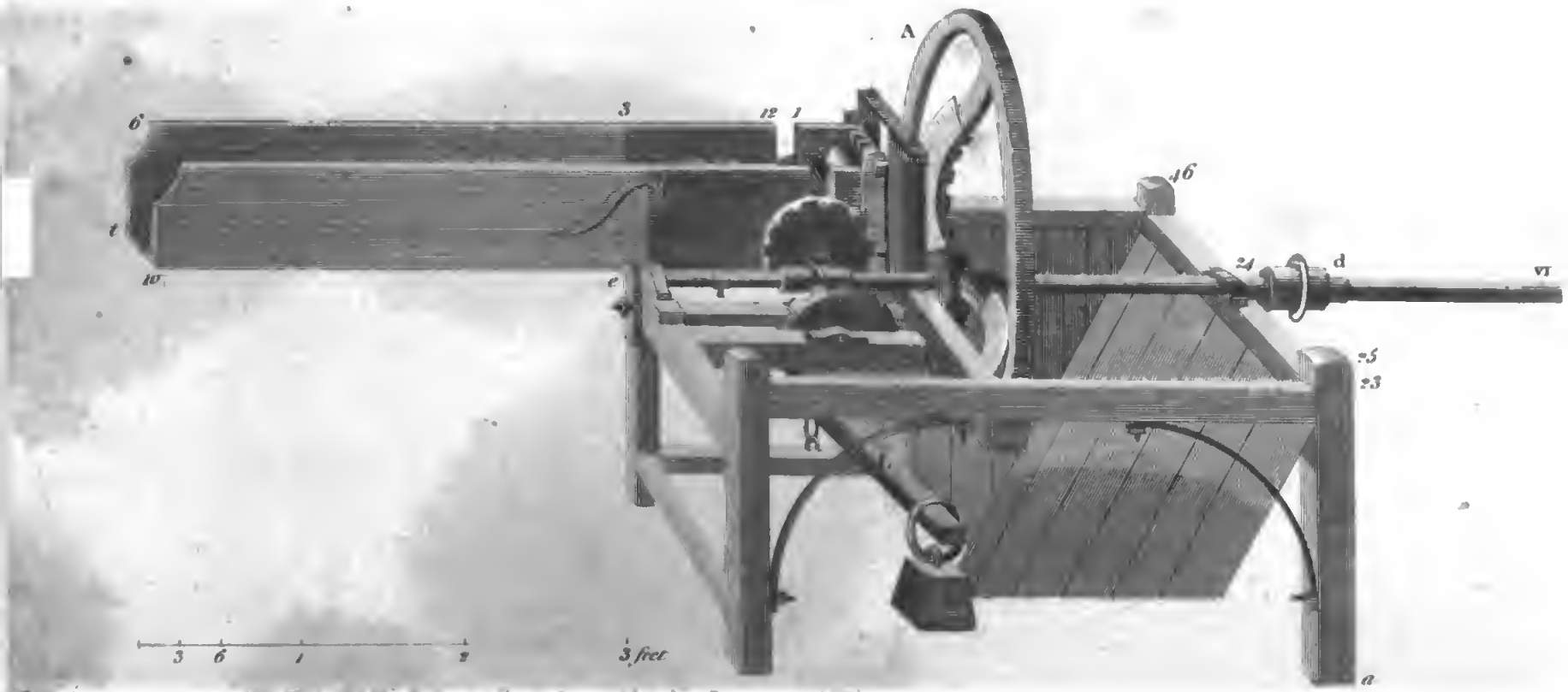
BUILDINGS.

SECTION I.—HOUSES OF PROPRIETORS.

The various advantages resulting from numerous residents of rank and fortune, and above all of a respectable yeomanry universally disseminated over its surface, can no where be more conspicuous than in Berkshire. The pleasantness of situation, the salubrity of the air, or the ready access to London, and in some places all these combined, have contributed to strew this county, pretty thickly, with elegant seats and villas, most of which are inhabited by their owners.

Windsor Castle, the favourite residence of our most gracious King, and worthy of the distinction it enjoys, looks down with a proud pre-eminence on surrounding objects, and in itself is the most majestic pile in the kingdom. This part of the county is further honoured by the partiality shewn it by the Queen at Frogmore House, where the most capital improvements have been made, and by the Princess Elizabeth, whose elegant little villa at once evinces her royal highness's taste, and her attachment to the vicinity. The lodges in Windsor Great Park and Forest likewise dignify and adorn the county. Cumberland Lodge, is in the occupation of his Majesty; Cranbourn Lodge of the honourable

A Chaff cutting Machine worked by a Horse at St. Leonards Esq.r



honourable G. Villiers; New Lodge, of the Princess Sophia of Gloucester; Swinley Lodge, of the Master of the Buck Hounds; and Henniken's Lodge, of Mrs. Cox.

In this part of the county, however, are many pleasant residences, which perhaps are still without a name, and therefore omissions will be excusable. The PRINCIPAL SEATS of the NOBILITY and GENTRY I have endeavoured to exhibit in the following list, though it is probable that even with this limitation, unintentional oversights will occur. At the moment the pen is recording, changes may have taken place.

As descriptions can neither be useful nor expected, I shall only observe, that Aldermaston House, Beaumont Lodge, Benham Place, Basildon House, Buscot Park, Buckland House, Coleshill, Englefield House, Holme Park, Padworth House, Pusey House, Sandleford, and Swallowfield, are among the most distinguished, in an architectural point of view.

Aldermaston House,	seat of	William Congreve, Esq.
Appleton,	——	Robert Southby, Esq.
Arborfield,	——	John Reeves, Esq.
Ardington,	——	W. Wiseman Clarke, Esq.
Ascot (Winkfield),	——	Daniel Agace, Esq.
Ashdown Park,	——	Earl Craven.
Barton Court,	——	Charles Dundas, Esq. M. P.
Basildon Park,	——	Sir Francis Sykes, a minor.
Beaumont Lodge,	——	Lord Viscount Ashbrook.
Bear Place (Wargrave),	——	Sir M. Zimenes.
—— Hill,	——	H. Fonnereau, Esq.
Becket House,	——	Lord Viscount Barrington.
Beech Hill (Swallowfield)	——	H. L. Hunter, Esq.
Beenham,	——	Rev. Dr. Bostock.
Belmont (Wantage),	——	—— Worthington, Esq.

Benham

Benham Place,	seat of	The Margravine of Anspach.
Benhams (Letcombe Regis),		T. Goodlake, Esq.
Bere Court (Pangbourn)	——	Rev. Dr. Breedon.
Betterton,	——	Rev. J. Collins.
Billingbere,	——	Lord Braybrooke.
Bill Hill,	——	Gene al L. Gower.
Binfield Manor House,	——	Claude Russel, Esq.
Binfield Villa,	——	O. E. Elliot, Esq.
Binfield Lodge*,	——	Theodore Price, Esq.
Bisham Abbey,	——	G. Vansittart, Esq. M. P.
Bradfield House,	——	Rev. H. Steevens.
Bradfield Hall,	——	Stephen Wilson, Esq.
Braywick House,	——	Hon. T. Windsor.
——— Lodge,	——	Thomas Slack, Esq.
Buckland House,	——	Sir John Throckmorton, Bart.
Bucklebury,	——	W. H. H. Hartley, Esq. a min.
Burfield Rectory,	——	Rev. Mr. Robinson.
Buscot Park,	——	E. L. Loveden, Esq. M. P.
Calcot (Tylehurst),	——	John Blagrave, Esq.
Canon Hill (Eray),	——	Mrs. Law.
Carswell (Buckland),	——	T. W. C. Perfect, Esq.
Chaddleworth,	——	R. W. Nelson, Esq.
East Challow,	——	Exuperius Turner, Esq.
Chamber House (Crookham),		Richard Tull, Esq.
Charlton,	——	William Price Esq.
Coleshill,	——	Earl of Radnor.
Coley House (Reading),	——	John Mac Connell, Esq.
Compton Beauchamp,	——	J. A. Wright, Esq.
Compton (near Ilsley),	——	Rev. H. Pottinger.
Culham Court,	——	Hon. Frederick West.
Donnington Castle House	——	Harvey, Esq.
——— Grove,	——	John Bebb, Esq.

* In the eastern part of the county, it is impossible to particularize every handsome villa which presents itself. There are several more at Binfield, as well as in many other parishes, where the situation is inviting.

Donnington

Donnington Priory, seat of F. Cowslade, Esq.
Down Place (Bray), —— John Huddleston, Esq.
Earley Court (Sunning), —— Rt. Hon. Sir W. Scott, M. P.
Englefield House, —— R. Benyon, Esq. M. P.
Farley Hill (Swallowfield), R. Stephenson, Esq.
Faringdon House, —— —— Bennett, Esq.
Fern Hill (Winkfield), —— Sir Theo. Metcalfe, Baronet.
Folly John Park (Winkfield), W. Blane, Esq.
Formosa (Cookham), —— Sir G. Young.
Gay's (Bray), —— Lord Lindores.
Greenham (Thatcham), —— James Croft, Esq.
Haines Hill (Hurst), —— Charles Garth Colleton, Esq.
Hall Place (Hurley), —— Sir William East, Bart.
Ham House (Wantage), —— Mrs. Walcot.
Hampstead Marshall Park*, arl Craven.
East Hampstead Park, —— Marquis of Downshire.
East Hanney, —— Charles Dewe, Esq.
Hatford House, —— Mrs. Walker.
Hendens (Bray), —— Rev. Dr. Trenchard.
East Hendred, —— Basil Eyston, Esq.
Heywood (White Waltham), John Sawyer, Esq.
Hinton Waldrish, —— Rev. Robert Symonds.
Hinton House (Hurst), —— Samuel Nicholls, Esq.
Holme Park (Sunning), —— Mrs. Palmer.
Holly Grove (Old Windsor), —— Mackay, Esq.
Holt House (Oakingham), W. Humphries, Esq.
Hungerford Park, —— John Willes, Esq.
Hurst House, —— Mrs. Wowen.
—— Grove, —— Boyle Dean, Esq.
Inholmes (Lambourn), —— J. R. Seymour, Esq.
Ives Place (Bray), —— Thomas Wyatt, Esq.
Kingston Bagpuze, —— Adam Blandy, Esq.
Kingston Lisle, —— A. E. M. Atkins, Esq.

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* A small villa recently erected. The splendid mansion here belonging to the family was burnt down, and has never been rebuilt.

Kirby

Kirby House (Inkpen), seat of J. Butler, Esq.
Lady Place (Hurley), —— —— Troughton, Esq.
Lambourn Place, —— —— Hippisley, Esq.
Langley Park, —— Sir W. J. James, Bart.
East Lockinge, —— J. P. Bastard, Esq. M. P.
Lovet House (Winkfield) —— Charles Chard, Esq.
Luckley House (Oakingham), C. Fyshe Palmer, Esq.
Maiden Earley (Sunning) —— Edward Golding, Esq.
Maidenhead, villas of —— Sir Isaac Pocock, Bart. / Sir William Herne.
Manor House (Old Windsor), H. P. Isherwood, Esq.
Marcham, —— George Elwes, Esq.
Midgham (Thatcham), —— William Poyntz, Esq.
Milton, —— J. Barrett, Esq.
Monkey Island and the Willows (Bray), } C. Townley Ward, Esq.
Oakfield House (Stratfield Mortimer), } Mrs. Brocas.
Oakley House (Marcham), Joseph Tompkins, Esq.
Padworth House, —— Colonel Griffiths.
Park Place, —— Earl of Malmsbury.
Penel Place (Old Windsor), James Bonnell, Esq.
Pinkney's (Cookham), —— J. Hussey, Esq.
Prior's Court (Chieveley) —— Lewis Buckle, Esq.
Prospect Hill (Tylehurst) —— J. E. Leibenrood, Esq.
Purley House, —— Hon. Mrs. Storer.
Purley Hall, —— Rev. Dr. Wilder.
Pusey House, —— Hon. Philip Pusey.
Radley, —— Sir George Bowyer, M. P.
Ruscombe House, —— Lady Eyre.
St. Leonard's Hill (Clewer), Hon. General Harcourt.
Scarlets (Wargrave), —— J. P. Leigh, Esq.
Sandleford House, —— M. Montagu, Esq. M. P.
Selwood Park (Sunninghill), James Sibbald, Esq.
Shaw, —— Sir Joseph Andrews, Bart.

Shinfield

Shinfield,	seat of	Alex. Cobham, Esq.
Shottesbrooke	——	A. Vansittart, Esq.
Southcote (Reading)	}	John Blagrave, Esq. R. and J. Stephens, Esqrs.
Southhill Park (East Hamps.)		Rt. Hon. G. Canning.
Sparsholt,	——	T. P. Gabbit, Esq.
Speen,	——	Rev. G. Wilde.
Standen House,	——	Thomas Michell, Esq.
Stanlake (Hurst),	——	Sir N. Duckenfield, Bart.
Streatley,	——	R. Baker, Esq.
Stubbins (Bisham),	——	Lord Dorchester.
Sulhamsted Bannister,	——	W. Thoyts, Esq.
Sunninghill Park,	——	G. Crutchley, Esq.
Sutton Courtney Abbey House		Francis Justice, Esq.
Swallowfield Place,	——	T. H. Earle, Esq.
Temple House (Bisham)	——	O. Williams, Esq. M. P.
Tidmarsh,	——	R. Hopkins, Esq.
Titneys (Sunninghill),	——	Sir H. Popham, Bart. M. P.
Tubney Lodge,	——	J. Ingram Lockart, Esq. M. P.
Wadley,	——	W. Y. Mills, Esq.
Wallingford House,	——	H. Blackstone, Esq.
Wallingtons (Kintbury)	——	J. Mackaness, Esq.
Waltham Place,	——	G. Grant, Esq.
Warfield Place,	——	Sir John Walsh, Bart.
——— Grove,	——	Lord Mountnorris.
Wasing,	——	William Mount, Esq.
Welford,	——	J. A. Houblon, Esq.
West Court (Finchampsted),		Rev. Ellis St. John.
Whistley Park (Hurst),	——	—— Griffiths, Esq.
White Knights,	——	The Marquis of Blandford.
White's Place (Cookham),		G. H. Leycester, Esq.
Old Windsor Lodge,	——	W. Webber, Esq.
Winkfield Park,	——	Thomas Bingley, Esq.
——— Place,	——	Stanlake Batson, Esq.
Witham,	——	Earl of Abingdon.
West Woodhay,	——	R. O. Sloper, Esq.

Woodley (Sunning),	seat of	James Wheble, Esq.
Woodside House (Old Wind.)		Rev. Dr. Ogilvie,
Woolhampton,	——	Lord Viscount Falmouth,
Woolley Park (Chaddleworth)		Rev. P. Wroughton.
Woombridge (L. Waltham),		F. Whitwick, Esq.
Wyfield (Boxford),	——	Rev. J. Wells.
Yattendon,	——	J. A. Gallini, Esq.

SECT. II.—FARM HOUSES AND OFFICES.

In passing through a part of Berkshire where yeomanry abound, and where their residences have an air of gentility, and frequently of elegance, a youth who accompanied me, and who belonged to a county not remarkable for good farm houses, several times asked me, as he came in sight of a Berkshire farmer's habitation, "What gentleman's seat is this?"

I do not, however, mean from this to infer that these houses are too good; but I wish to mark the impression their appearance made, when contrasted with a neighbouring county. A yeoman possessing from 200*l.* to 600*l.* a year in landed property, and who occupies his domain himself, may well rank with a gentleman of three times the nominal income, who lives solely on his rent, and is entitled to every corresponding accommodation.

Many, indeed, of the farm houses and offices are not less adapted for comfort, than for the convenience of carrying on the various agricultural occupations with facility and advantage.

The farming establishment at Buscot Park, which is eligibly situated on rather a level spot, at a suitable distance from the mansion house, is replete with every accommodation; and might serve as a model for a farm of

Cart-lodge of C. L. Lowndes Esqr.

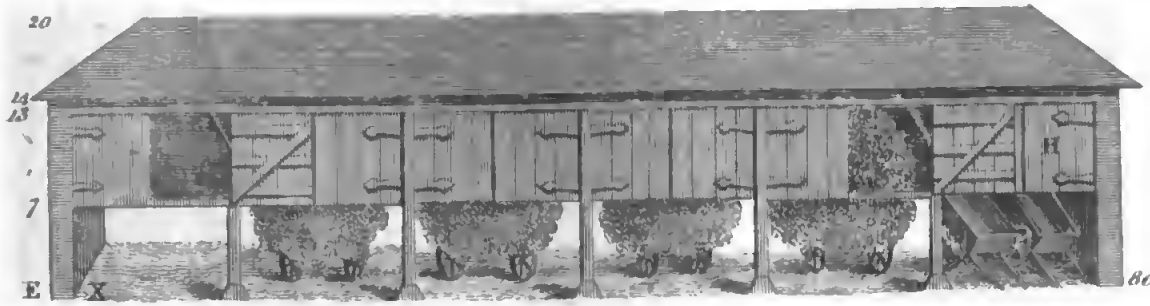
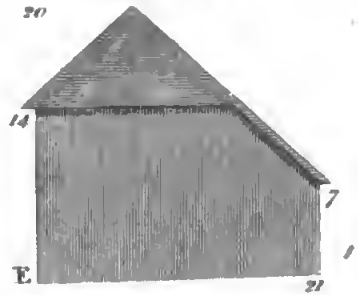


Fig. 2

5 10 20 ft.

Fig. 1

Fig. 3



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of such magnitude, even in the hands of a tenant. It is arrangement, contrivance, simplicity, and adaptation, that constitute the merit of agricultural buildings. The affectation of elegance never appears so ridiculous as when it is visible in a pig-sty, or an ox-stall. I can tolerate it when it is seen in stables for saddle and coach horses, erected near a gentleman's seat; but in farms, utility alone should be consulted, and it should always be combined with economy. I do not, however, recommend that a gentleman's or a nobleman's farm appendages should be equally as simple and unostentatious as a rack-renter's; but I am of opinion, that even in such persons, it is shewing a false taste, and setting a bad example, to incur idle expence. Mr. Loveden's farm yard is wholly free from the faults which I feel it my duty to expose; and on this account, a drawing of it may be useful and acceptable to the public. No words can convey such a distinct idea of buildings, or other objects, whether animate or inanimate, as an accurate delineation, and therefore on this and future occasions, I shall wave any attempt at particular description, when I can command the assistance of the draughtsman. I must just beg leave, however, to observe, that excellently as Mr. Loveden's farm appendages are adapted to the various purposes for which they were intended, had they been built at once, and from an uniform plan, it is probable that the parts would have been less broken and intermixed.

Sir John Throckmorton, and other gentlemen of fortune, in various parts of the county, who are attached to the science of agriculture, have likewise, in general, farm yards on a good principle, and in a style corresponding with their destination.

Among the yeomanry also, the farm appendages are frequently

frequently well situated and well adapted. The completest model of a farm yard I have ever seen, and at the same time the most easily practicable is that belonging to my friend Mr. Henry Selwood, of Pebworth, in the parish of Aldworth. It forms an oblong square of sixty yards by forty. At the upper, or western end, stands the dwelling house; on the north are barns and stables; and on the south are sheds and stalls for cattle; the east end, which might likewise be applied, if necessary, to the same purpose, being a high brick wall, with an entrance to the whole.* From the buildings, the area is pitched all round, for the space of six or seven feet, with a channel or drain, to convey the rain from the roofs of the buildings out of the yard, and thus to prevent it from mixing with the dung. The interior area has a fall of about three feet each way towards the centre, and in the lowest spot is a pool fenced round with a pump in the middle, to receive the essence of the dung, which rich fluid is thrown over the litter in the yard, to assist the fermentative process, or is carried, by means of a water-cart, and spread over the fields. Thus the most valuable part of the dung is preserved, and applied to the most beneficial purposes; a part which is too generally suffered to escape, and to pollute the springs and brooks.

Indeed it is the prevailing defect of the farm yards, particularly in those of ancient erection, to disregard situation and exposure, to allow the essence of the dung to be lost, and to neglect sheltering the cattle from the cold winds, which must inevitably prevent their

* It no doubt would have been better for the sheds and stalls to have had a southern aspect, and for the house to have occupied the eastern side.

thriving

thriving so well as they would otherwise do. But the farmers, as well as their landlords and agents, are now perfectly aware of these considerations, and they apply the proper remedies, as often as circumstances permit.

The farm buildings belonging to the rack-renters and lifehold tenantry, and more especially such as have no leases, are generally inferior to those of the yeomanry, and the tenure may in some measure be discovered by the style of the accommodations. Some land-owners, however, are at a very liberal expence in furnishing their tenants with every requisite building, and in assisting to keep them in good repair. Instances of this kind are too numerous to require indication.* That they are not universal, can be no matter of wonder to any considerate person. Buildings are always attended with a very heavy expence; and where the landlord is to support them, there is often too little attention paid by the tenant to trifling repairs, which would frequently save the charge of greater. It would tend much to the improvement of farm buildings, if both landlord and tenant had a joint interest in raising and upholding them.

The usual custom of the county, at present, is for the landlord to engage to put the buildings in good repair, on a tenant's entering, and afterwards to find rough materials, except straw. The tenant covenants to pay workmen, and to fetch materials within a moderate distance, gratis. Many disputes must unavoidably arise from this arrangement, to prevent which, the buildings frequently fall into dilapidation; the land-

* A modern built farm in the parish of Pusey, belonging to the estate of the honourable Philip Pusey, deserves to be particularized. It is on an excellent plan, but perhaps too expensive.

lord, or his agent, neglects to perform his part of the contract, and the tenant, rather than offend, is satisfied with the worst accommodations. At length, some of the farms become uninhabitable, or must be new built; and the pernicious alternative is resorted to, of throwing the land to others, better circumstanced in this respect, but perhaps sufficiently large already. It is to the expence attendant on buildings more than any other cause, that the consolidation of several small farms into one is obviously to be ascribed. If the house and offices were once put into good repair, I see no reason why the tenant should not be bound to keep them so, during his occupation, on being found rough timber; and that on his quitting the premises, a valuation should be made of the dilapidations by a surveyor appointed on each side, whose award, with the assistance of an umpire, if necessary, should be final. This is exactly the situation of the clergy, who frequently leave their families in circumstances far from affluence, and therefore they are usually vigilant to keep their parsonages in such repair as may entail the least burden on their posterity. A farmer would, no doubt, be influenced by the same consideration; and if he pays no rent for his residence, it cannot be unreasonable to keep it in repair, or pay for his neglect. I merely throw out this as a hint, and am unwilling to tread further, on what may be considered as tender ground. I cannot, however, refrain from observing, that under the name of conveniences, many farms have more buildings than are necessary. The multiplication of buildings is not always the multiplication of individual comforts, or of public advantages, and the more purposes to which the same building can be applied the better, both for landlord and tenant. It is probable, that the gradual introduction

troduction of threshing machines will render barns of the present size* and number less necessary. This will be an important advantage, independent of many others connected with this improvement.

In the eastern parts of the county, and along the line of the Kennet, the farm buildings are commonly of brick, tiled, and possess some degree of elegance. In the north-western parts they are chiefly of stone, covered with Oxfordshire slates; and on the whole are inferior in appearance and accommodations. Too many of the outhouses and barns are still thatched, a mode of covering not less dangerous † than expensive, if the frequency of repairs be taken into the account. The practice, however, is gradually discontinuing, and in another age will probably become obsolete.

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* The largest barn in this county, and which must have been built at an enormous expence, is that belonging to the manor farm at Cholsey, Lord Kensington's. It is 101 yards long, 18 yards wide, and is supported by 36 pillars of stone, each a yard square. On one of these pillars is the following inscription, which records a fact perhaps unique in the annals of agriculture.

"In this barn James Lanseley threshed for Mr. Joseph Hopkins 5 qrs. 7½ b. of wheat in 13 hours, on March 15, 1747." This extraordinary thresher was in his 93d year in 1805, and was as remarkable for his longevity, considering the business he followed, as for his performance in it. It seems he had two men to assist him in placing the ears of corn under his flail, and removing the straw; yet the feat is still astonishing, though well authenticated.

At Great Coxwell, near Faringdon, is another large barn, though far inferior to the above. It is 148 feet long and 40 wide, and is a very fine piece of masonry, of vast strength, built by the abbots of Beaulieu, to whom it formed a grange. Bradfield barn is 191 feet long.

† If buildings are thatched, a spark will frequently raise a conflagration, which receives fuel from every covering of the same kind. In the village of North Moreton, a considerable number of houses, and other buildings, were lately destroyed from this cause.

Stone staddles of the usual form are common in farm yards throughout the county, and the ricks, both of hay and corn, are made with a peculiar degree of neatness. Ricks are far better than barns for protecting the corn from vermin, which do incalculable mischief. For this reason every expedient should be resorted to that can save the granary, as well as the unthreshed corn, from their depredations. For the sake of convenience, the granary should always be connected with the barn. A loft over the threshing floor, when the height is sufficient, with a trap-door, and a simple apparatus to draw up and let down the sacks, would often be advisable, on the score of security, as well as cheapness. The dairies, the stables, and the ox-pens, are generally on a good principle.

Dr. Beeke, of Ufton, shewed me an ingenious contrivance of tying up cattle for fatting, by which they occupy the least possible room, and are kept perfectly steady and quiet. He copied it from the farmers in Holstein, when travelling in that country; and it deserves to be generally known and introduced.

The plan consists in having a manger the length of the building, at such a distance from the wall as to allow provender to be lodged, and a person to walk behind to supply it. From the inner side of the manger rise uprights, at suitable distances, with a transverse spar, about the height of the animal's head, bored with holes, namely, two between each upright. A collar fixed round the animal's neck or horns, of a proper length to allow it to stand at ease, and to lie down, but not to turn round, is passed through one of the holes in the transverse, and continued to the other, where it is secured with a knot and small knob of wood. There are divisions in the crib, or manger, which

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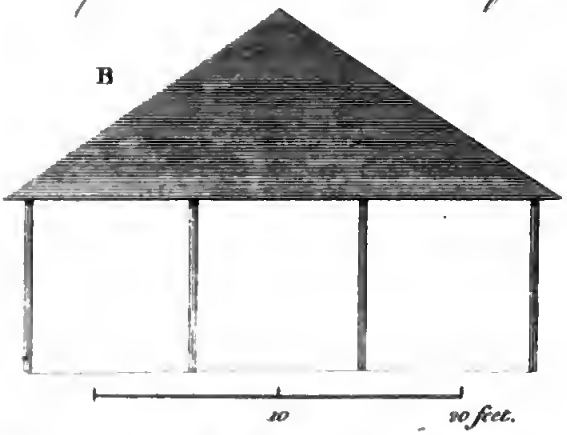
Elevation of Mr. Berriman's Shed for Cattle.



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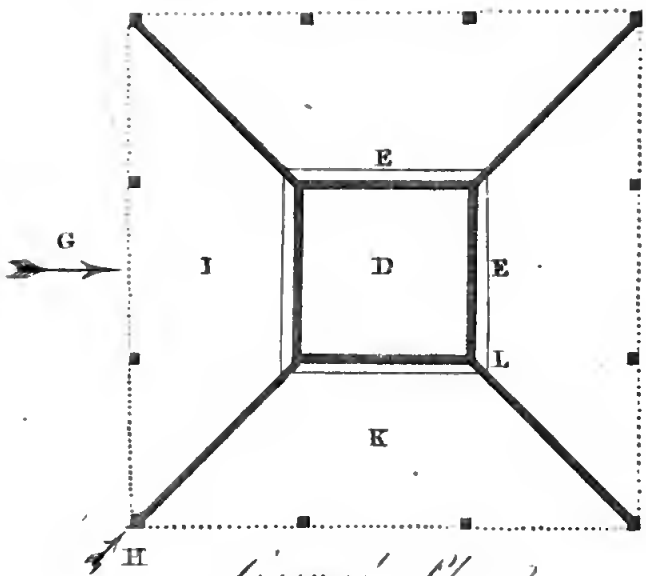
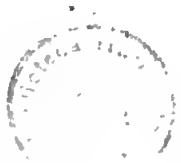


Ground Plan



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which represents two sides of a triangle, but none between the animals, which, however, cannot possibly annoy each other, from the manner in which they are tied up. Nothing can be less expensive, or apparently more effectual.

A very simple and useful shed for cattle has lately been invented by Mr. Berriman, of Speen, of which I have obtained drawings. A and B are its elevations. They are both on the same plan; but fig. A was added to shew how easily a simple cattle shed may be rendered an ornamental building. Fig C is the ground plan of these sheds. D is a place for fodder of any kind, out of which it is to be distributed into the racks and mangers at E E. As cattle when feeding do not often agree very well together, in this shed, those feeding in I, cannot see such as are in K, or other parts; and if one animal should drive another into a corner (which frequently happens, to the great injury of the weak cattle) as at L, it is obvious, that as this shed is constructed, the beast so driven can with facility escape, none of the corners being at right angles. Likewise from whatever quarter the wind blows, there will be always part of the shed sheltered from its influence. If it blows as at G, then three sides will be sheltered; if as at H, two sides will still be free from it.

His Majesty's moveable barn on the Norfolk farm in Windsor Park, has not been found to answer the sanguine expectations of Mr. Pearce, and therefore has been taken down. A skeleton barn is much approved by Mr. Loveden, from its being at once unexpensive and useful.

SECT. III.—COTTAGES.

LAND is only the raw material, and money is nothing more than the barter of labour. It is the tenant of the cottage that cultivates the soil and produces the grain; it is from the sweat of the peasant's brow that all the various vocations of agriculture derive their spring; and to agriculture it is again owing that there is not only bread for the labourer, but a surplus for the manufacturer, and the means of purchasing comforts for the farmer, who directs the machine of rural economy, as well as luxuries, for the proprietor of the soil, whose happier lot sets him above the necessity of personal labour. Nursed in the lap of penury and hardihood, it is from the cottage that issues the nervous arm, the intrepid heart—the soldier who marches to fight the battles of his country, and the sailor who extends her commerce and protects her shores.

In the edifice of human society, the common people are the grand base on which the superstructure of rank and property is reared; and if such is the importance of these humble but numerous members of the community, by every rule of equity and every law of right, they are entitled to such enjoyments as are consistent with their situation, and the services they are called on to perform.

To better the condition of the poor has been a leading aim for some years with many benevolent and patriotic minds; and if their endeavours have only partially succeeded, it ought to stimulate them to persevere. The object is worthy of their best attention, their most zealous exertions; and amidst the discordant plans that have been proposed, some will probably be found applicable to the end in view.

But

But whatever variety of opinion may exist in other respects, among those who have devoted their time and talents to the consideration of the state of the poor, it is admitted, on all hands, that the more the comforts of their *homes* are increased, the more likely they are to become industrious, sober, and good. Poverty and riches are only comparative terms, and have less influence in enjoyment than many are willing to allow: the former is often attended with content, the last is not exempt from cares. In the humble cottage, genuine happiness is as often an inmate as in the mansion of the great; and it is the duty of the superior orders to see that it is rendered such as may conduce to the welfare of its inhabitant, and stimulate him to excel in praiseworthy conduct. A neat and decent cottage will have a natural effect on the cleanliness and decent deportment of its tenants; while the miserable hovel, where man feels himself degraded, will have a baneful influence on his manners, and repress every laudable endeavour.*

Those who have studied human nature are aware of the connection between externals and the tincture the mind receives; and I have ever been inclined to believe, that there is an innate love of independence in the heart of man, and a wish to subsist by his own exertions, rather than by the bounty of others. The first step then towards cherishing this disposition, is to

* To strengthen my argument, I might quote the effects of an institution in a neighbouring county, under the patronage of the Earl and Countess of Harcourt, which has for its object to encourage the peasantry to industry and cleanliness, by exciting a spirit of emulation, and bestowing correspondent rewards. The cottages at Nuneham are just what they ought to be, comfortable, but unostentatious; and kept neat, because they are capable of being so.

give

give the poor man some ideas of comfort, by providing him with a suitable habitation, at a rent so moderate, and with accommodations so judicious, that he may be animated with the desire, and feel the possibility of keeping himself above the necessity of resorting to parochial relief.

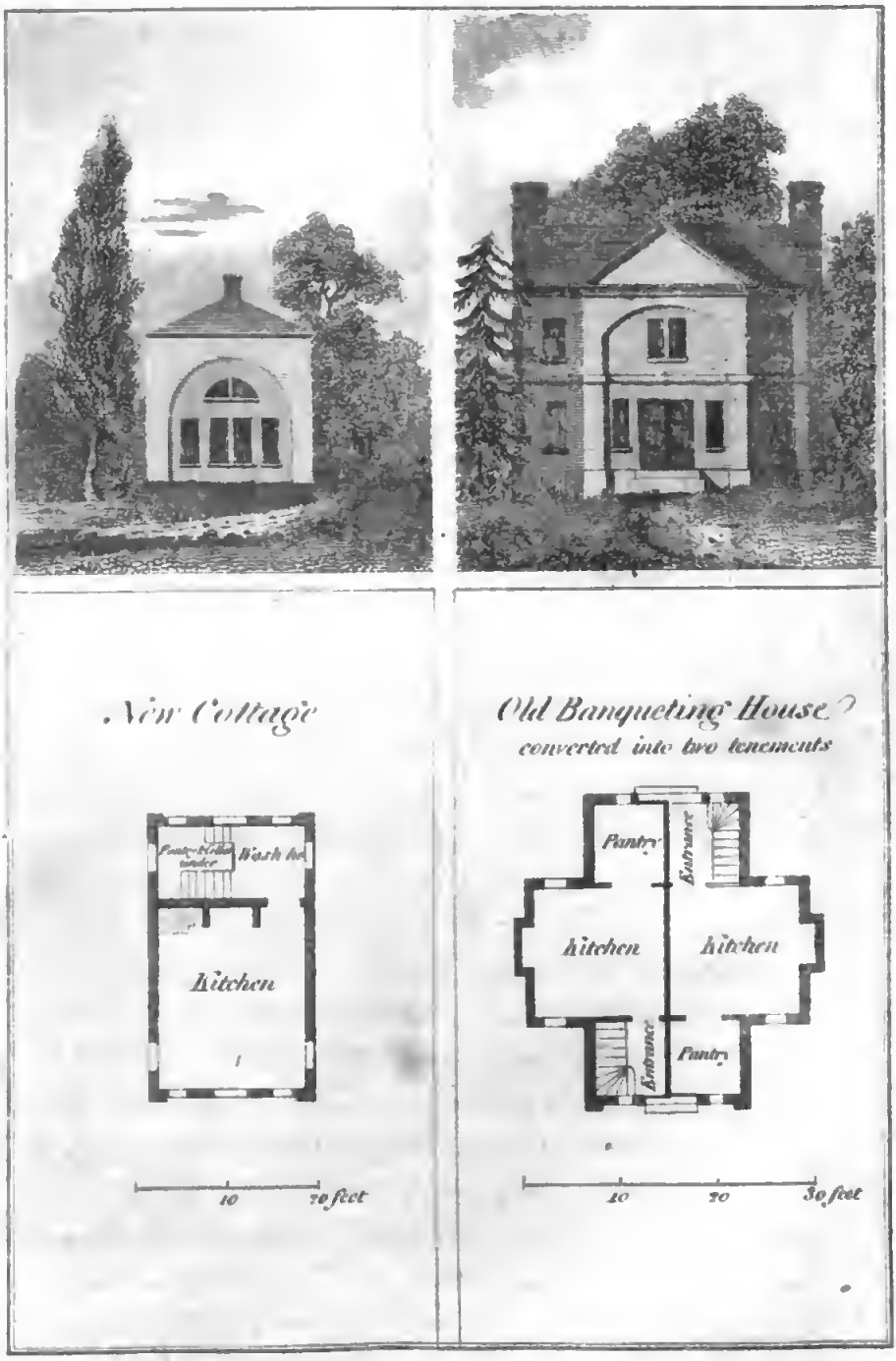
Of the Berkshire village cottages * in general, though there are many honourable exceptions, when compared with the opulence and public spirit of the county, I cannot speak in terms of high commendation. The broken window which "admits the wind, and yet excludes the day," the ragged thatch, or the broken tiles, the floor of earth, the walls brown with smoke, and frequently only one bed-chamber for a numerous family, raise painful emotions which I cannot repress or conceal. Where such are the abodes of the poor, I have generally observed that the parish rates run highest, and that the decent pride which might have been an auxiliary to virtue and to industry, is wholly lost.

But if it should be urged that parishes or individuals cannot be at the expence of erecting and upholding cottages superior to those which meet the eye in every direction, I will close with the argument; and maintain, from the preceding considerations, as well as what follows, that it would be economy to pay more regard to the dwellings of the poor. It is not always the quantum of expence, but the judgment with which it is applied, that produces beneficial effects. To whitewash cottages, both internally and externally, once every year, or every second year, is a cheap improvement, and will always be salutary to health, and often

* In the towns they are commonly equal, if not superior, to what we find in almost any other part of the kingdom.

stop

Cottages in Windsor Great Park.



stop the progress of infection. To make windows which will open, and to avoid crowding too many persons into the same apartment, will promote the same humane ends, and consequently save expence. The legislature, by a wise policy, has exempted from window duty such houses belonging to poor persons as have less than six lights; but this benefit is lost to those who cannot afford to purchase the windows themselves, even where they have room and occasion for their use.

It is with unmingled satisfaction, however, that I record the generous exertions of his Majesty in Windsor Great Park, as well as those of several gentlemen of fortune in various parts of the county, who have erected neat and comfortable residences for their labourers, and whose example I hope will not be lost on other proprietors. To build lodges and cottages round domains, is not less ornamental than it is humane. It is providing an asylum for servants who have merited protection by diligent labour, and it is at the same time securing their own property from depredations, by multiplying the means of superintendence. The magnificent seat may evince the opulence of the possessor; but it is the state of the cottages and farms on his estate that bespeaks the character of the man!

It is unquestionably a misfortune to the poor, that the land-owner does not always keep the cottages in his own hands, instead of letting them with a farm to his tenant. The steward, or agent, may probably be averse to the trouble of collecting the sometimes casual rent of 40 or 50 shillings a year; but his employer would find it for his interest to have a liberal controul over the peasantry in his neighbourhood, to whom it would thus be in his power to shew countenance, and extend encouragement,

couragement, proportioned to their merits. Mr. Loveden is fully aware of this, and on his extensive estates, the cottagers are all his own tenants; but then he is likewise his own steward.

The industrious labourer might frequently have a small portion of waste land assigned him by the lord of the soil, on which to build a cottage, and gradually bring into cultivation portions of land now wholly useless. Such property he should hold by the payment of a mere quit-rent of twenty-one years, the next twenty-one should have a low fixed rent, and after that a moderate sum should be paid annually in perpetuity. Or the spot might be made copyhold of inheritance, which would probably be the most eligible mode for both parties.

But if the landlord does not wish to encumber himself with the charge, or to attend to the allotment of such humble domains, the parish officers should not forget that they are empowered to erect cottages on the waste; and it would often be good policy to carry this into effect. In all cases, however, where such edifices are wanting, it is advisable to build them in groupes of two, three, or more, according to circumstances, not only to reduce the expence, but to promote the comfort, and improve the moral habits of their inmates. Pilfering, poaching, and other vicious or idle habits, are less likely to be indulged under the immediate eye of neighbours, than when the cottages stand singly, and at some distance; while the advantages of society will be found on various occasions, and will naturally excite a spirit of virtuous emulation.

On the subject of the quantity of land that should be attached to cottages, I have heard and read many contradictory opinions. Sir George Bowyer, of Radley,

ley, a young gentleman of the highest promise, told me that he had it in contemplation to rebuild or repair all the cottages on his estates, and to allot to each sufficient land to keep a cow. While I admired his philanthropy, I took the liberty to question how far this sacrifice of ground would be beneficial to the peasant. In some situations, where there are extensive wastes, a cow, and occasionally a few sheep, may be kept by the poor; but I have seldom seen that this materially increased their comforts, while it had a natural tendency to render them idle, and to give them ideas of a visionary independence, incompatible with the duties of their station.

From a rood to an acre of land for a garden, orchard, and potatoe ground, seems to me as much as a labourer can cultivate with advantage to himself and to the public. He should have enough to employ his leisure hours, which would keep him with his family, and prevent his resorting to the public house; but he ought not to occupy such a quantity as would be an excuse for his neglecting regular labour, unless he could have a sufficiency to keep him in constant employment.

Pigs and poultry I wish to see every peasant possessing;* but I am convinced that cows, horses, or sheep, rarely benefit him. Yet I am not unacquainted with the value of milk in every family; and I regret that suckling of calves in some places, and dairying and feeding hogs in others, are used as excuses for not parting with even a pint of that wholesome fluid to the

* In the eastern parts of the county, many cottagers pay their rent and leave a surplus for themselves, from pigs, geese, and domestic fowls. In some places, their gardens and orchards yield the same advantages.

neighbouring

neighbouring cottagers. To effectuate every good purpose, let the farmer be compelled, by legislative provision, or by covenants with his landlord, to keep a cow or two for milking, and to allow his labourers the option of purchasing a certain quantity of milk on fair terms, according to the number in each family.

What I would recommend others to be obliged to do, Mr. William Stone, of Englefield, voluntarily performs; and Mr. James Webb, of Oakingham, a man who is a public blessing to the town in which he resides, keeps a sufficient number of Holdernesse cows, which are excellent milkers, for the sole purpose of accommodating the poor. I hope these are not the only instances that may be found in Berkshire of this praise-worthy practice. Though it may not be in my power to record them, the reward will be the same!

Of late years, gentlemen in this county have generally, and therefore it would be invidious to discriminate, allowed the poor to plant potatoes on wastes, and by the sides of roads, where the garden ground was not sufficient. This is certainly serving them most essentially, at the same time that it is promoting the cause of agriculture, and teaching habits of industry, without which, if all the property in the kingdom were divided among them, they would neither be happy nor respectable.

I conclude this section in the words of the Poet of the Poor.

"O give the heirs of poverty their cots,
Attach them fondly to their native spots;
Amidst their thorny paths entwine a flow'r—
Their's soft submission, thine attemper'd pow'r.
As the swain views his speck of property,
In the rude hut a paradise shall see,

From

From peace-crown'd dwellings of a humble size,
Shall, pleas'd, behold more lofty mansions rise;
Shall gaze, unenvying, on the rich domain,
Yet of his own a fonder sense retain;
For, ah! it stands on consecrated ground,
A charmed circle, though a narrow round!
Where if he finds in kind benevolence,
Against the beating storm, a generous fence,
In glad return for all the bounty shewn,
His pow'r, his praise, his hand, his heart, thy own!"

PRATT'S COTTAGE PICTURES.

CHAP. IV.

MODE OF OCCUPATION.

SECT. I.—SIZE OF FARMS. CHARACTER OF THE FARMERS.

ON no subject connected with rural economy, is there more diversity of opinion than in regard to the size of farms. From the monopoly of land, many political writers have deduced as a consequence the prevailing pauperism and the acknowledged increase of the poor-rates; while on the other hand it has been contended, that on very small farms only enough can be raised to support a family, and hence little or no surplus is left to be brought to market, for the maintenance of that class of men who are engaged in trade or manufactures.

As is common among disputants, both parties push their arguments to an extreme. It is true, indeed, that the general consolidation of small farms into large ones would still further increase the number of the poor, by throwing persons of small capital, who have been brought up to agriculture, out of employ, and reducing them to the rank of hired labourers; but where there is such a gradation in the size of farms as will allow men who respectively can command from 500*l.* to 5,000*l.* to suit themselves with bargains, I cannot believe that the

the system is wrong, or that an agrarian law ought to be passed to regulate the extent of farms.

Yet I will own, and I formed the idea during the years of scarcity, in 1796 and 1800, and communicated it through the medium of the public prints, that they, who in any degree contribute to the increase of the poor, should be rated to their support, not according to the actual rental, but by an ascending scale. The legislature has recognized this principle in imposing taxes, and why should it not be extended to poor-rates?

For instance, a farm of 50*l.* a year should be assessed at 6*d.* in the pound, rent; 100*l.* at 7½*d.*; 150*l.* at 9*d.*; 200*l.* at 10½*d.*; 250*l.* at 1*s.*; 300*l.* at 1*s.* 1½*d.*; 350*l.* at 1*s.* 3*d.*; 400*l.* at 1*s.* 6*d.*; and so on in proportion. By this means the small farmer would have some chance of preserving his independence, or even of rising above the difficulties to which his want of capital exposes him, and of supporting his family in some degree of credit and respectability; while the great farmer, who would still be at a much less relative expence, would be rated in no higher proportion than he was well able to bear. Every encouragement should undoubtedly be given to honest industry; and there can be no reason why a man who possesses only 500*l.*, which might be sufficient to stock and carry on the business of a farm of 100*l.* a year, should be reduced to the necessity of entering into a new line of business, or sinking into a common labourer.

It will be allowed, indeed, by every candid observer, that in the present state of agriculture, a man who is to depend solely on farming can have little prospect of supporting a family, and of contributing in any considerable degree to the public supply, who occupies less land

land than will employ a team of three or four horses; but at the same time I cannot help thinking, that five farmers of that description would raise more marketable produce than one who monopolized the same quantity of land, and who could derive a handsome income, merely from superintendence and judgment. A labouring farmer, or a man who is obliged personally to work, is not less useful in the scale of human society than he whose capital enables him to occupy half a parish, and to live in a degree of style and affluence suitable to his means. I have heard it maintained, indeed, that the former must work harder than a day labourer, and it probably is the case; but then his toils are sweetened by the reflection, that he is to reap the fruits of his own industry, and that he has no occasion to apply for parochial relief, either for himself or his family. This important consideration should not be overlooked in such discussions. Voluntary labour is no hardship; and living on humble fare is no privation, to him who feels that he is providing against the contingencies of fortune, and laying up something against the approach of age.

It is incontestibly the man of property alone who can afford to make essential improvements, and to such we owe the present flourishing state of agriculture; but still I contend, that a mixture of all sizes of farms is best for the public, as bringing men of different capitals and talents into action, and giving that scope for independence, which is the pride and the glory of any country.

That this is in a great measure the case in Berkshire, will appear from the following memoranda, taken in different districts of the county; and if the number of small farms has been diminished, and of large ones still further

further increased, it is undoubtedly to be ascribed to the expence of buildings, and the selfish policy of agents.

As it is my wish, however, to be perfectly impartial, and to allow more competent judges to speak their sentiments, I shall lay before my readers some arguments for and against large farms, written by gentlemen of the county, and whose opinions now lie before me.

"A farm," says one, "smaller than what is sufficient to employ from one to three thousand pounds in the cultivation thereof, is too small for the employment of any other than a labouring farmer. One thousand acres divided into seven or eight farms in most counties, would only be employment for labouring farmers; and I believe it will be admitted, that the fewer hands employed in cultivating lands, provided there is no neglect, the more the community is benefited; because less of the produce will be consumed on the farm, and consequently more carried to market.

"To arrange an estate so as to remove every inconvenience in the cultivation thereof, is to render it the most beneficial to the public and to the owner. Let any man say, whether most produce will be carried to market from 1,000 acres in two farms, under the management and maintenance of two families, or from 1,000 acres in eight farms, where it has to maintain the same number of families, who work hard and live poor, to pay even a small rent, having seldom any thing to carry to market, their own sustenance consuming nearly all the produce of their small farm; and let him consider with what facility the work of a farm goes on, by the union of numbers in men and teams."

Another observes, that "farms from 200*l.* to 500*l.* a year, are the very best that can be for the public.

There can be no reason why farms should be less than 300 acres, except that a smaller proportion of butter, eggs, pigs, and poultry, is sent to market. But I believe that the addition of corn and cattle that are to be found in lieu of them, will very amply compensate for those losses. And as to population, I am fully persuaded that where farms of a large size, from 300 to 1,000 acres, are properly cultivated (by which I mean a more operose cultivation, assisted by a sufficient capital), many more servants and labourers will be found to be employed than on the same number of acres when divided into small farms."

A third, with equal plausibility urges, "that the cultivation would in all respects have been much more increased, had not that idea infused itself into the breasts of our landholders, of letting out their lands in large portions, and by that means destroying the increase of population among the poor labouring peasantry, the most useful part of the community, who are entitled, by every law of nature, justice, and propriety, to a share of the inclosures of the waste lands, now kept in an useless state, and generally, when inclosed, added to the farm of some rich overgrown cultivator, instead, as they ought to be, of being allotted to such honest, industrious, labouring men as were found worthy, and thus increase the population, without which no agricultural improvement can be effected. The population of this county is much less than I should expect, from the richness of the generality of the soil it ought to be, and would have been, had proper divisions of land been made. At present there is little more than one inhabitant to four acres of land, when from a regular division of the whole of the lands into small farms, in the course of a series of years, they might be doubled; and

and so far from tending to increase the price of provisions, this increase would reduce them, as I believe all countries, well peopled, can live cheaper than where the inhabitants are few. For instance, in Brussels, and all the towns in the Low Countries, which I believe were better peopled than any other part of Europe, before the ravages of war caused an alteration in the price of provisions, a man might dine off seven or eight different dishes for the value of a shilling, which in this country would cost five shillings. And if this country were peopled equal to what the produce might be made, that produce, instead of enhancing the price of provisions, would be the most effectual means of reducing them."

Size of Farms, and value of Land in the VALE.

Coleshill, and the neighbouring dairying parishes, about 300*l.* per annum, on an average. Value of land about 1*l.* 10*s.* per acre.

Uffington.—From 60*l.* to 600*l.* per annum. Average rent of land 1*l.* 10*s.* per acre.

Faringdon.—From 200 to 500 acres. Arable and pasture 1*l.* 10*s.*, meadows from 2*l.* 2*s.* to 2*l.* 10*s.* per acre.

Buckland.—From 75 to 300 acres. Average of land 1*l.* 5*s.* per acre.

Kingston Bagpuze.—Farms moderate. Common field 15*s.*, inclosures 1*l.* 1*s.* per acre.

Stanford.—Farms generally pretty large; but some as low as 30*l.* per annum.

Sparsholt.—From 150*l.* to 400*l.* a year. Uphill from 7*s.* to 12*s.* per acre; middle 1*l.* 1*s.*; vale 1*l.* 10*s.*

Childrey.—Similarly circumstanced. Value of land nearly the same.

Letcombe Basset, and Regis.—All inclosed. Not one farm in three formerly. Arable land about 1*l.*, downs 10*s.* per acre.

Wantage.—From 50*l.* to 400*l.* a year. Many about 150*l.* or 200*l.*

Hanney.—Farms moderate. Arable 1*l.* 5*s.* to 1*l.* 10*s.*, meadow 2*l.* per acre.

Marcham.—From 60*l.* to 300*l.* a year. Arable 18*s.*, grass 2*l.* to 3*l.* per acre.

Wytham.—From 100*l.* to 300*l.* Average per acre 1*l.* 10*s.*

Radley.—From 200 to 500 acres. From 1*l.* 8*s.* to 1*l.* 10*s.* per acre.

Abingdon.—From 50 to 400 acres. Arable land from 1*l.* 10*s.* to 2*l.*, meadows from 2*l.* 10*s.* to 3*l.* 10*s.* per acre.*

Steventon.—From 300 to 400 acres. A malt rent paid.

Milton.—From 400*l.* to 500*l.* a year. Average about 1*l.* 5*s.* per acre.

Harwell.—Lately inclosed. Little alteration in the size of farms. Land from 1*l.* 9*s.* to 1*l.* 19*s.* per acre, exclusive of tithes.

Hagbourn.—From 60*l.* to 500*l.* a year. Average of land 1*l.* 5*s.* per acre.

East Hendred.—From 100*l.* to 500*l.* a year. About 1*l.* per acre.

Wallingford.—Farms generally moderate. Arable from 1*l.* 1*s.* to 1*l.* 5*s.*, grass 2*l.* 2*s.* and upwards per acre.

Cholsey.—Generally pretty large. Land 1*l.* 1*s.* per acre.

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* In the vicinity of towns, small inclosures of grass land usually let very high, for the sake of accommodation. It is only land rented for profit to which I have affixed a value.

Streatley.

Streatley.—From 60*l.* to 350*l.* Average of arable land 15*s.*

IN THE CHALK DISTRICT.

Ashbury, which, though the village stands in the vale, has a large proportion of down land; farms run from 25*l.* to 600*l.* a year. Value of land from 10*s.* to 1*l.* 10*s.* per acre.

Lambourn.—Farms generally large. Land from 14*s.* to 1*l.* 5*s.* per acre.

Shefford, Great.—About 200 acres each. More farms now than formerly. Some new farms built. Arable 18*s.*, meadow 2*l.* per acre.

Shefford, Little.—Only two farms in the parish, which contains more than 1,000 acres.

Great Fawley.—The largest farm about 500*l.* a year.

Boxford, on the confines of the vale of the Kennet.—Farms moderate. Arable land about 1*l.*, meadows 2*l.* 2*s.* per acre.

West Ilsley.—The largest farm contains 1,000 acres. Generally large.

East Ilsley.—From 200 to 300 acres. Average rent of land about 15*s.*

Aldworth.—Farms from 300 to 500 acres. Worth from 10*s.* to 15*s.* per acre.

Hampstead Norris.—Farms from 100 to 500 acres each.

Blewbury.—Farms from 100*l.* to 550*l.* per annum. Land from 1*l.* to 1*l.* 8*s.* About 1,500 acres of down land have been brought into cultivation by a recent inclosure.

Bradfield.—From 40 to 900 acres. Average of land 1*l.* 3*s.* per acre.

Tidmarsh

Tidmarsh.—From 50 to 500 acres. Land worth 1*l.* 6*s.* per acre.

Pangbourn.—Farms from 100 to 400 acres. Land from 1*l.* to 3*l.* per acre.

Purley.—The whole parish, nearly 1,000 acres in one farm. Land 1*l.* 8*s.* per acre.

Basildon.—Farms from 50 to 350 acres. Land from 18*s.* to 1*l.* 15*s.* per acre.

Wargrave.—From 50 to 400 acres. Land from 1*l.* to 2*l.* per acre.

Hurley.—Farms from 100*l.* to 400*l.* Average of land 1*l.* 3*s.* per acre.

Bisham.—From 150*l.* to 700*l.* a year. Land, including tithes, 1*l.* 15*s.* per acre.

Cookham.—From 200 to 600 acres. Value of land about 1*l.* 10*s.* per acre.

IN THE VALE OF THE KENNET, &c.

Hungerford.—Farms of all sizes. Average of arable land 18*s.* per acre.

Kintbury.—Farms moderate. Average of arable and pasture land 1*l.* 5*s.*, meadows 2*l.*

Inkpen and Woodhay.—Nearly similarly circumstanced.

Enbourn.—Farms of various sizes. Only one very large. Average of land 14*s.* per acre.

Speen.—Farms moderate. Arable land 1*l.*, pasture 3*l.* to 4*l.*, owing to its vicinity to Newbury.

Newbury.—Farms small. Rent various, according to soil and situation, from 10*s.* to 4*l.* 4*s.*

Reading.—From 50 to 300 acres. Arable 1*l.* 10*s.*, meadows from 2*l.* 2*s.* to 3*l.* 3*s.*

Sulhampstead.—Farms from 50 to 400 acres. Average 1*l.* 7*s.* per acre.

Thatcham.

Thatcham.—From 50*l.* to 600*l.* a year. Land from 5*s.* to 3*l.* 3*s.* per acre.

Swallowfield.—Average of farms 100*l.* a year. Of land 1*l.* per acre.

Shinfield.—Farms moderate. Land on an average 1*l.* 1*s.* per acre.

Sunning.—From 150 to 300 acres. From 1*l.* 1*s.* to 1*l.* 5*s.* arable, meadows 1*l.* 15*s.*

Tilehurst.—Farms of various sizes. From 12*s.* to 1*l.* 15*s.* per acre.

Tidmarsh.—From 50 to 400 acres. Land 1*l.* 6*s.* per acre on an average.

Englefield.—Only three farms in the parish. Average of land 1*l.* 8*s.* per acre.

Aldermaston.—Farms from 50*l.* to 200*l.* Rent from 1*l.* 1*s.* to 1*l.* 10*s.* per acre.

Beenham.—Farms pretty large. Value of land as in Aldermaston.

Ufton.—Average of farms 250 acres; of land 1*l.* 1*s.* per acre.

Stanford Bingley.—From 100 to 400 acres. Average of land 1*l.* 1*s.* per acre.

IN THE FOREST DISTRICT, &c.

Oakingham.—Farms of all sizes, but none very large. Average of land 1*l.* 1*s.* per acre.

Hurst.—From 100*l.* to 300*l.* per annum. Average of land 1*l.* per acre.

Ruscombe.—Farms moderately large. Average of land 1*l.* per acre.

Waltham, Lawrence.—Largest farm 250 acres; some very small. 1*l.* 10*s.* per acre.

Waltham, White.—Farms from 150 to 320 acres. Average of land 1*l.* 10*s.*

Bray.—Farms of all sizes. Arable land 1*l.* 10*s.*, grass from 2*l.* to 3*l.*

Windsor, Old.—Farms generally small. Arable 1*l.* 10*s.*, meadows 2*l.* 2*s.* per acre.

Sunninghill.—Farms moderate. Average of land 15*s.*

Warfield.—Average about 100*l.* a year; of land 1*l.* per acre.

Easthampstead.—Farms about 100*l.* a year. Land from 15*s.* to 1*l.* per acre.

Binfield.—From 150 to 300 acres. Arable land 1*l.* 1*s.* per acre.

Winkfield.—Farms generally small. Arable 15*s.*, grass from 1*l.* 10*s.* to 2*l.*

Properly speaking, Hurley, Bisham, Remenham, Wargrave, and Cookham belong to this division, in a local point of view; but for the sake of uniformity I have followed the divisions of the soil in Chap. I.

On the whole, I think I am warranted in taking the average rent of farms throughout the county at 150*l.** a year, and of land of every description at about 1*l.* 1*s.*; and I farther beg leave to remark that the quantity of acres ought not to be the criterion of the largeness or smallness of farms. A sheep farm on the hills must of necessity be extensive, for very obvious reasons, to render it an object to a man with a sufficient capital; yet the rent is probably not higher than in the vale, where half the number of acres constitute what is called a large farm.

No general rules can be applied to all situations;

* In the remarks on Mr. Pearce's Report, 1794, the average rent of farms was supposed to be under 100*l.* a year; but the rise of rent, and other circumstances, have certainly rendered that calculation inapplicable to the present time.

and

and after all that can be said by political economists, local knowledge and sound judgment must be left to exert themselves, and they will seldom decide wrong in the aggregate.

Without any partial praise, the character of the Berkshire farmer unquestionably deserves to stand high. The yeomanry have already been mentioned with due applause; and the influence of their example descends to the rack-renters, many of whom are not inferior in point of education and manners, and in the spirit with which they carry on agricultural improvements, when circumstances allow them to exert their native energies.

In short, a hospitable style of living, liberality of sentiment, and independence of principle, are characteristic of the Berkshire farmer, to which he unites persevering industry and integrity in his dealings, which render him worthy of the comforts he enjoys.

SECT. II.—RENT.

THE rent of lands is almost wholly paid in money, except when estates, of which there are several in this county, are held under colleges and chapters, when the usual reservations of corn-rents, and sometimes of malt, are made. The policy of this has been sanctioned by the experience of ages, and therefore it furnishes no subject for remark in this place.

Land owners seldom stipulate for any services, beyond what are connected with the repairs of buildings on the respective farms; and, according to the best information, they allow from three to six months rent in hand.

hand. Few, very few, have the character of being exorbitant in their demands; and many instances occur where the same race of tenants, and the same race of proprietors have for generations maintained an unbroken connection, which is equally creditable to both.

SECT. III.—TITHES.

When it is considered, that the title by which a tenth of the produce of agriculture is appropriated to the church, is far more ancient and better ascertained than that to the other nine parts, it will appear surprising that the dues of the clergy should generally be paid with reluctance, and that lay proprietors, on the contrary, should find little difficulty, either in obtaining a fair rent for their lands, or a reasonable composition for their tithes. Yet the fact is indisputable, that incumbents, however moderate in their demands, can seldom advance the composition for their tithes in any proportion to their value, without exposing themselves to obloquy and opposition; or if they take their tithes up, are frequently subject to expences and inconveniences, besides producing an unfavourable effect on agricultural improvement, to encourage which ought to be no less the object of private than of public policy.

The farmer, when he takes a bargain subject to tithes, will undoubtedly estimate the proportion he is to pay to the incumbent, not according to what may have been demanded twenty or thirty years ago, but what it is actually worth at the present moment;* and if, by

* I have seen many good effects resulting from the proprietors of land becoming personally responsible to the clergyman, and letting their estates,

the lenity or forbearance of the rector or vicar of his parish, he pays less, he ought to consider it as a sacrifice that often can be ill afforded, and as laying him under an obligation which he should endeavour to return by every means in his power. Were this the case, that harmony which the good of religion, and the interest of the parties require, would be preserved inviolate; and none but the extortionate incumbent, of which I have not met with a single instance in this county, would be the object of deserved enmity and reproach.

In fact, the rights of the clergy are exacted with extreme moderation, small as many of their livings are, not only in Berkshire, but I believe in most parts of England—the highest composition for vicarial tithes in this district being only 3*s.* per acre in dairying farms, and the highest rectorial no more than 7*s.* in the most productive and well cultivated parishes; while several vicars, to my knowledge, have only the very low composition of 9*d.* in the pound rent, and rectors 4*s.*: so that, taking the average of vicarial compositions, they do not exceed 1*s.* 3*d.* in the pound, nor great tithes 5*s.** This must obviously be extremely reasonable; and I can add, from a very minute investigation of the fact, that not one rector in ten takes his tithes in kind;

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estates, especially when there are no leases, tithe free. The advantage is mutual; and it prevents misunderstandings, as well as an opposition of interests, which frequently arise, when the tenant and the incumbent are left to themselves.

* It is not however always considered, that where there is a vicar, the impropriator should regulate his composition for great tithes according to their respective rights. Where the impropriate great tithes are 5*s.* in the pound, or by the acre, the vicar, on an average, is entitled to 1*s.* 6*d.*, or a fifth and a tenth, as the case may be.

and

and I heard only of one or two vicars who did so, and who were probably driven to this measure, by the stubborn opposition of their parishioners.* Yet notwithstanding this indulgence, I will not disguise that complaints exist of the hardship of tithes from the farmer, and of the unpleasant situation in which the incumbent is sometimes placed, by trying to raise his humble benefice to two-thirds, or even one-half of its real worth. Hence there must be something radically wrong in a system, which excites prejudices in the most liberal and enlightened minds, and which equally militates against the interests of religion and the interests of agriculture.

So much, however, has been written on the subject of tithes, that it can scarcely be supposed a new light can be thrown on it. But as I have had some experience in such affairs, and the business in which I am engaged naturally calls on me to deliver my unbiassed sentiments, I shall first notice the different kinds of ecclesiastical property, either as it originally stood, or as it has been altered by competent authorities, and then propose some beneficial improvements under each.

Tithes, or a tenth of the produce of the fruits of the earth, as well as of cattle, have been so long established, that without asserting their divine right, it may be maintained, that every estate in the kingdom was once subject to them, and that every exoneration has arisen, either from encroachment, from royal grant on the dis-

* I will candidly own, that except in extreme cases, it is seldom beneficial to the clergy to take up their tithes. The expence of servants and horses, and the charge of poor rates, to which they are thus rendered liable, must inevitably absorb all the profits which can accrue, over and above the terms of a fair composition, while the chance of being unpopular or unhappy, must be increased in a tenfold degree.

solution

solution of the abbeys, or from impolitic concession, by accepting a specific sum of money in lieu of them, which, as it does not vary with the times, has left the clergy in many parishes of this kingdom, without any adequate provision. All moduses and compositions real are of this nature; but as many of these are fixed and irrevocable, it must be left to the generosity of patrons, or the interference of the legislature, to rectify the evils which they have produced, and to fulfil the scripture maxim, that "the labourer is worthy of his hire."

With regard to tithes in secular lands, though the church may suffer in the amount of its income, it derives a considerable degree of security for what it still possesses, from this very circumstance; and I shall touch no further on this point than to propose, that they should be commuted for land, according to their value. To this I can see no reasonable objection, and no insuperable difficulty, if a legislative plan were once chalked out for its accomplishment.

As for tithes in the hands of the clergy, whether great or small, I think they might be beneficially commuted, by first taking their fair valuation by two competent sworn commissioners, one of whom should be named by the incumbent, and thus fixing a sum to be paid according to the combined prices of *corn*, *meat*, (mutton and beef) and *malt*, to be taken on the average of the seven preceding years, and to vary with the times every subsequent seven years. And in order to prevent any thing personal between the incumbent and his parishioners, except in the duties of his vocation, I would make the overseers and churchwardens the responsible agents in collecting and paying the sum to be raised, with

with certain provisoes and securities, against misapplication and loss.

A corn-rent alone is found to be an inadequate mode of commutation*; but taking the three great articles of life in every family, *bread*, *meat*, and *malt*, the clergyman would be secure from injury, and the farmer paying only in proportion to the value of his produce, would have no reason to complain. It will be observed, however, that I wish the laws uniformly to act for the benefit and security of the parochial minister, without subjecting him to the necessity of coming forward in a personal and partial light. By these means, what he might lose in the influence of fear, would be amply compensated for on the principle of love; without which he can seldom be happy himself, or discharge the duties of his sacred office with effect and satisfaction.

Where lands have been exonerated from tithes by an act of parliament, and an allotment made in land in lieu of them, even where an adequate value has been given, which in no instance that has fallen within my notice is really the case,† it is throwing too much land

* On this subject I recollect having a friendly conversation, some years ago, with the late venerable and learned Dr. Douglas, bishop of Salisbury, my diocesan, who seemed strongly inclined to corn-rents, but which I took the liberty to state were not an equivalent for tithes.

† A fifth of the arable, and a ninth of the pasture is by no means equal to the value of tithes; and so well are the clergy convinced of this, that though the above is the general allowance, several parishes that have been inclosed in this county, under certain acts of parliament, are not exonerated from tithes. Of this *description* are the following:

Buckland, the Rectory,	Shalbourn,
East Garston,	Sparsholt,
Harwell,	Stanford,
East Hendred,	Stratfield Mortimer,
Lambourn,	Ufton,
Letcombe Regis,	Lawrence Waltham.

Land

into mortmain, it is subjecting the incumbent to all the cares and incumbrances of landed property, and driving him to the necessity of becoming a farmer, for which he is often ill qualified, or of letting his lands, according to the existing laws, on such conditions, that improvement must be checked, and industry languish.

In order, however, to obviate some of the evils resulting from a practice that has already become too general, I would propose, that after reserving a sufficient glebe, which in every instance should be done, with a due regard to the value of the living, the incumbent should be allowed to lease the remainder, at the full value, with the consent of the patron and the bishop, on a running lease, determinable every three or seven years, at the option of either of the two principal contracting parties. A new incumbent would thus, without waiting too long, have an opportunity of improving his property, if he thought it capable of being so; and the tenant having a fair prospect of occupying the land under any change, would feel himself equally safe in making improvements, as if he rented of a layman. All dilapidations and repairs on the farm, however,

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Land in lieu of Tithes.

Ashbury,
Buckland, the Vicarage,
Denchworth,
Faringdon,
Farnborough,
Hampstead Norris,
Hinton,
Remenham,
Shilton,
Shrivenham,
Speen,
Sunningwell,
Uffington.

Corn Rents.

Little Faringdon, the Vicarage,
Pusey.

Money Payment.

Inkpen.

N. B. The greatest part of these inclosures have taken place within the last ten years, particularly those where the lands are not exonerated from tithes.

should

should fall on the tenant; who ought not only to be bound in proper covenants, but be obliged to give due security for their performance, as well as for the payment of the rent.

Or, to land belonging to the clergy, the *corn*, *meat*, and *malt* rents might be applied as well as to tithes, with leases for twenty-one years certain, which would probably be the most eligible mode, as it would give uniformity to the plan of clerical provision, and would always afford an income, according to the times.*

These plans I propose to the Honourable Board and to the public with the utmost diffidence, and with no invidious or partial aims. Whatever is dear to the clergy, or estimable in their character, must depend on the influence they possess in their respective parishes, and the independence of their means. There are often claims upon them from poverty and misfortune, to which perhaps they are obliged from the necessities of their own families to turn a deaf ear; or if the heart gives, the purse denies: they are subjected to numerous privations and disqualifications, which laymen who can launch out into business, never know; their education is expensive, and their returns at best but slow, and

* As it is my duty to give publicity to the sentiments of others on this important topic, I subjoin the suggestions of some gentlemen belonging to the Newbury district, in observation on Mr. Pearce's Report.

"Perhaps an equivalent for tithe, at so much in the pound, on the annual rent, may be the least objectionable mode of abolishing tithe in kind; and if the tithe owner is not satisfied with the rent, let him have the power of throwing the valuation of the land into the hands of commissioners. The proprietor may possibly object to this on account of the bar to any great improvement: but is he not liable to this on the poor rates and other parochial assessments?"

most

most commonly inadequate to their comfortable support. Their profession renders them objects of respect; but they ought not to be objects of pity also!

The suggestions I have offered for ameliorating their condition, should they have the good fortune to attract notice and to be carried into effect, would be much more beneficial to the public than to themselves; for I recur to my position, that in order to do all the good which a clergyman ought to wish, no personal conflicts and misunderstandings should be allowed to exist between him and his parishioners on the score of income. The clergy are seldom qualified to shine as men of the world; and the less they have to do in its mercenary pursuits, the more their characters will be exalted, and the more service they will be able to perform in the line of their duty. If our constitution, to which we all naturally cling, is to be preserved, it must be through the exertions of the clergy of the establishment, who frequently, under circumstances the most discouraging, and amidst means the most contracted, have, with scarcely an exception, steadily persevered in inculcating submission to the laws, and allegiance to their sovereign; and if on any occasion their influence has been inferior to their zeal, if from the nature of their provision, agricultural improvement has been checked, or misunderstandings have arisen, let it not be imputed to them, but to the operation of causes in which they had little or no share.

I shall only further beg leave to remark, that sectaries of all denominations voluntarily contribute, at their own expence, to support their ministers, whether qualified or not for the office they undertake; and that it is only the clergy of the establishment who are subjected to the inconveniences and mortifications of assert-

ing their legitimate rights, and of collecting their indisputable dues. I could wish that the necessity of this were done away, on account of superior interests, and not from worldly views. During a painful, an active, and eventful life, I have frequently seen and lamented the cruel dilemma to which a clergyman is reduced, either of making himself unpopular by claiming some share of his rights, or of submitting to every species of imposition and evasion from the ungenerous and the purse-proud. He is often the only man in a parish who is precluded from any honest means of improving his fortune; and yet he is too frequently the only man who is envied for the little he has obtained. A living of 300 or 400*l.* a year, in the present times, is sufficiently small for a gentleman and a scholar; and yet few, very few, comparatively speaking, have half that income; while those persons who are engaged in trade and commerce, by honest industry alone, will realize annually more than a clergyman has to subsist on.

It is therefore a duty which cannot be violated on any principle of justice, honour, and humanity, to allow an incumbent the moderate dues to which he is entitled, which are commonly far below the rank and character he has to support in life. I do not wish to see livings equalized any more than I wish to see an agrarian law; but I maintain, that every parish priest ought to have a comfortable residence and a competent provision; and even something beyond this is requisite to promote emulation, and to reward meritorious conduct. Laws to enforce residence must ever be nugatory, while it is impossible, without inhumanity, to carry them into effect.

According to a statement published by a former respectable diocesan, now Bishop of Durham, it will be three

three hundred years before the operation of Queen Anne's bounty, amounting to 15,000*l.* annually, will raise every living in England and Wales to the small sum of 50*l.* a year. This was made in 1789; and if they are in any measure increased from other causes since that period, so is the expence of subsistence in a double proportion. The prospect is certainly sufficiently discouraging to candidates for orders; and if there were not a portion of higher prizes in the ecclesiastical lottery, it is to be feared that, though the labour is great, the workmen would be few.

PECULIAR CUSTOMS.

I did not find many peculiarities in the mode of tithing; and from the circumstance of compositions being so general, it is probable that if any existed, they are now obsolete. Vicars are usually entitled to the tithe of woods. At Hurley, a composition, under a decree of chancery, which has been hitherto acquiesced in, though certainly not binding, is paid in lieu of nine loads of billet wood, at the rate of 12*s.* per load, though the fair value is from 36*s.* to 42*s.* per load. Even the nine loads of billet wood seem to have been a still more ancient composition, in lieu of the value of the tithes, on cutting the woods formerly belonging to Lord Lovelace.

The parishioners who pay tithes to my respected friend, the vicar of Cumner, formerly one of the largest parishes in the county,* have a claim of being enter-

* North Hinksey, South Hinksey, and Wootton were all taken out of it by act of parliament, about a century ago.

tained at the vicarage, on the afternoon of Christmas-day, with four bushels of malt brewed into ale and beer, two bushels of wheat made into bread, and ½ cwt. of cheese. An allowance in money is now made in lieu of this singular entertainment.

At Southmoreton, where there are four tithings, one of them belongs to the rector *solely*, and another *jointly* with a layman, in which the tithes are taken in kind, and their produce being divided into five parts, the rector has two of them. The other tithings are in lay hands.

SECTION IV.—POOR RATES.

From the returns made to parliament, it appears that Berkshire raised by the poor's rate, from Easter 1802 to Easter 1803, the sum of 96,860*l.*; that the rates in 1783, 4 and 5, averaged 49,646*l.* per annum; and in 1776 the poor's rate within the county was only 39,726*l.*; from whence it is evident that, in the space of less than thirty years, the charge of maintaining the poor has been more than doubled. And since the last estimate was made by order of government, though immediately following a period of peculiar distress, there is little reason to suppose that the rates have been materially and generally decreased, taking one year with another, though it is not probable they have risen.

In 1803, the rates amounted to 4*s.* 11*d.* in the pound; but it should be observed, that they are seldom assessed on the real rent. In some parishes, we find an old valuation, founded on unknown data, which has been acquiesced in, beyond the memory of man; in others the quality price of the land on an inclosure has served as

as a guide for more than twenty years, regardless of the improved value of the property; so that, on the whole we must consider the estates and houses assessed, as valued at little more than two-thirds, certainly less than three-fourths of their real rent. For dropping fractional parts, and taking the sum raised in 1803, at 97,000*l.*, and the rate per pound at five shillings, the annual rental of the county would only be 388,000*l.*; whereas I have no reason to think that my estimate of 550,000*l.* as the rent of lands, houses, and mills, is above the value. *

It would tend much to allay the public clamour of the increasing expences of the poor, and would promote the ends of private justice, if the poor rates were universally assessed, according to the real value, to be taken without prejudice or partiality by sworn parochial commissioners, every seven years. We know that estates are frequently doubled in rent, while the nominal assessed rate remains the same. From a variety of calculations, and taking a number of averages from accurate data, I find that the poor's rate on the actual rents throughout the county, does not exceed 3*s.* 4*d.* in the pound, which will make a rental of about 560,000*l.* per annum: taking the assessment of 1803 as the standard of computation. This tallies pretty nearly with the estimate already made.

Moveable property, as far as I have obtained information on the subject, is seldom assessed. In Abingdon, however, where the rates in St. Helen's parish now average about 6*s.* 6*d.* on a three-fourths value, and in St. Nicholas' about 7*s.* 6*d.*, on a two-thirds value, stock is charged in a moderate proportion †;

* See Chap. II. Sect. I.

† From the information of George Knapp, Esq. M. P.

and

and in towns where the poor is numerous, from the decline of manufactures or other causes, it seems not only just, but expedient, that the poor's rate should be assessed on moveable as well as immoveable property.

Instead of this, I have to lament, that in some parishes, the proprietor of a cottage and a garden, who lives by his daily labour, and ought to be an object of respect and indulgence, because he keeps himself from being chargeable to the parish, is assessed in his full proportion; while a person who is making hundreds a year by trade or a profession, pays only to the poor for the premises he occupies.

But to return from this digression; it appears that of the 96,800*l.* collected for the use of the poor in Berkshire, in 1803, the sum of 67,589*l.* was expended *out* of houses of industry or workhouses, 14,404*l.* *in* houses of industry or workhouses, and 3,610*l.* in law expences! making in all 85,603*l.* The remaining 11,257*l.* was probably expended in county rates, and other parochial assessments, and allowances, usually provided for from the poor rates. The number of persons relieved *out* of houses of industry or workhouses, not including their children amounted to 5,620*l.*; of persons relieved *in* houses of industry or workhouses, including children, 1,169*l.*; and of persons relieved occasionally, 8,266*l.*

In several parts of the county, and particularly in towns, there are houses of industry or workhouses, which seem to me synonymous, though the former are properly under the superintendence of guardians, and the latter are conducted by the parish-officers, or some persons employed by them. As far as concerns the aged, who have no connections, capable or willing to take care of them, and children who are orphans, I think,

think, under proper management, that they are excellent institutions, and furnish a necessary asylum in populous parishes. I would likewise have distinct wards, or unconnected buildings, for the idle and the profligate of both sexes, where they should be kept to some degrading and laborious employment, till they gave evidence of an amendment of manners; but when families are hurried to these receptacles of misery, for no fault of their own, but because they want relief at home; or when the ties of nature are lacerated by separating parents from their children, I must reprobate the system, whatever diminution of expence it may produce, or by whatever authority it may be enforced.

It is, however, against the principle and not its application, in this county at least, that I enter my protest. The enlightened and liberal-minded magistracy of Berks, as well as the generality of parish-officers, would never sanction any practice repugnant to every moral and every natural feeling. As for the infamous mode of letting the poor by the head or by the gross, to some shameless wretch, equally destitute of humanity and of principle, who will make a profit by his contract, and provided he does not actually starve the miserable beings who are forced to come within his garrison, is called a good manager, I know no terms of reprobation that can stamp it with its just character. I will never advocate the cause of idleness, of extravagance, or of profligacy; but when I see in our public papers, advertisements with the striking title of the "*Poor to let*," I blush that I belong to a country where the sense of right and wrong is so far confounded, where even the decencies of life and the social sympathies are forgotten or despised.

The

The house of industry at Faringdon, a recent establishment under the authority of the act of 22 Geo. III. "For the better relief and employment of the poor," is well conducted by a governor and governess, paid a specific salary, and under the active superintendence of guardians and a visitor. While the guardians are vigilant and attentive, the best consequences may result, both to the parish and the poor, from such an institution; but the misfortune is, that on individual, rather than combined exertion, the management will ever depend. Mr. Mattingley, of this place, to whose zeal the house of industry owes so much, and who takes a pleasure in promoting the comforts of the poor who are committed to it, will, it is too much to be feared, leave no person of equal assiduity to supply his place. Into this house, the poor are generally sent, except during occasional illness, when they are relieved at home. Children in large families are likewise received here; and both boys and girls are employed in spinning worsted, till they are of an age to be employed in agriculture, or to be put out to service. Cloth for the use of the house is also prepared here, except the weaving part, which was attempted, but failed. About one hundred persons were in the house when I visited it, in company with Mr. Mattingley, to whose attentions and information I am much obliged. I saw as much appearance of comfort and happiness as I ever expect to witness in such a situation; but for the reasons already assigned, I have radical objections to such indiscriminate admissions.

The building and furnishing of this house cost about 6000*l.*; though Mr. Hallet, the lord of the manor, gave the ground on which it stands and the gardens, for a very

very trifling acknowledgment. The situation is airy and pleasant, the regulations are excellent, and the utmost attention is paid to cleanliness and health.

The poor from neighbouring parishes are received here, at a certain sum per week, varying with the times: about *3s. 6d.* may be considered as the average.

The poor's rate in Faringdon is now only about four shillings in the pound rent, though formerly it was much more.

At Wantage, there is a workhouse on a large scale, indeed much too large, as it will contain three hundred persons, though there were only seventy in it when I visited the place. It stands about a mile and a half from the town, and has a garden of about nine acres, given by the lord of the manor. On the information of Mr. R. Taylor, a man who appears to interest himself with much zeal for the welfare of the poor, I find that many are relieved out of the house, and that no harshness is ever used in sending them hither. The poor's rate has been diminished more than two-thirds by the establishment. It does not exceed three shillings in the pound on the real rent. It is needless to say, that the poor are employed in the manufactures of the place.

At Newbury, where the poor are numerous, not only from the loss of the woollen manufacture, but from the prospect of becoming entitled to a situation in one of the numerous charitable establishments in that town, which tempts many to become parishioners,* there is a workhouse, in which a little collar cloth is manufac-

* It might be supposed that the various endowments for the support of age, and indigence, in this parish, would relieve the parish; but on very competent authority, I am told that they produce the contrary effect.

tured.

tured. Only the aged and the orphans are sent to it; the poor in general being relieved at home. The rates here amount on an average to about nine shillings on the real rent of lands, and three-fourths of houses. 5000*l.* has been paid for the annual support of the poor in this parish.

At Hungerford, there is a workhouse which is managed by a committee, and is said to produce good effects.

At Lambourn, the poor's rate on an average is about seven shillings.

Wallingford has no workhouse in either parish. The poor's rate in the three parishes with churches is said to be 10*s.* or 11*s.* in the pound: in All Hallows about 3*s.* 6*d.*

Oakingham pays about eight shillings in the pound rent to the poor's rate.

The average poor's rate for the three parishes of Reading is about eight shillings in the pound. A standing overseer is here found beneficial; and indeed in all populous parishes, it is economical to allow a salary for this purpose. The regular parish officers, however, should not consider this as exempting them from responsibility. It is their duty to co-operate, and to inspect.

The poor's rate in Abingdon has already been mentioned. It has a large workhouse for old people and children, most ineligibly situated in the middle of the town, and which ought to be removed, and built in a more open and airy situation. Between eighty and a hundred persons generally tenant this ill-contrived receptacle of poverty and destitution, who are employed in the sacking manufacture. Of late years, it has been well conducted; but formerly was *farmed*, and consequently

quently the poor were neglected. A more liberal system indeed begins every where to prevail, and for the sake of humanity may it extend more and more!

At Ilsley where there is no workhouse, the poor's rate amounts to 9*s*. or 10*s*. in the pound.

Maidenhead, which stands in the two parishes of Bray and Cookham, pays about 5*s*. in the pound rent to the poor.

Windsor has a workhouse, at present *farmed;* the rates from 4*s*. 6*d*. to 5*s*.

The extensive parish of Bray has a workhouse, under a master and mistress, at a stipend. On an average about seventy persons, chiefly the aged and children, are received here, who are employed in the sacking manufactory, which is wholly conducted within the house. Beating hemp is held out *in terrorem* to the idle and the profligate. This establishment is found beneficial to morals and to economy; but most probably it owes its chief success to the attention of that excellent magistrate, the Rev. Mr. Townshend, the incumbent of the parish. The poor out of this workhouse are employed at their own homes, when at a loss for work. The rates are about 5*s*. in the pound.

Country parishes, where they have either no workhouse, which is always proper on a small scale at least, or where it is only used in extreme cases, vary considerably in their contributions to the poor, according to the number of inhabitants and the mode in which they are employed. Agriculture has a natural tendency to diminish the number of the poor; manufactures to increase them. Even the parishes in the vicinity of towns where manufactures are established, in the second or third generation, whatever they may do in the first,

first, feel the demands on them multiplied from this cause.

The poor's rate, on the nominal, but not on the real rent, in most parishes which are not very populous, and where there is a considerable quantity of land, pretty much divided in occupation, averages about 4*s*. 6*d*. in the pound. At Milton, it is only about 2*s*. At Hurley, and several other populous parishes, from 6*s*. to 7*s*. or even 8*s*. A few are still higher. In general I observed, that they were lowest where the weekly wages were highest. This confirms my principle, that the love of independence is natural to man; and that the *possibility* of subsisting without parochial relief should be put within his reach, before he is severely censured for asking it.

To the Rev. Dr. Rawbone, vicar of Buckland, and rector of Hatford, I am indebted for the following anecdote, relative to the latter parish. "About forty years ago the poor's rate was unknown. Eighteen pence per week was *forced* upon the parish clerk, to prevent the farmers from becoming chargeable to the adjoining parish of Buckland. Now upwards of 100*l*. per annum is paid from the three farms which constitute the parish."

With all our improvements in agriculture, and the extent of our resources, it is probable that no parish in the central parts of the kingdom will ever be so circumstanced again!

On the whole, however, though there may be some mismanagement, and frequently, a want of judgment in affording relief, in such a manner as might render it at once consistent with genuine charity, and productive of ultimate saving, the poor are in general liberally provided

provided for, as far as the distribution of money goes. In another chapter, this subject will be resumed: it is too important in a work of this nature to be slightly touched.

SECTION V.—LEASES.

THE arguments for and against granting leases are so strong and so equally balanced, that it would be presumption in me to pretend to decide.

In favour of leases it may be contended, that land is a raw material which requires labour and capital to render productive, and that no one was ever expected to establish a manufacture, where he had not a reasonable probability of reaping the fruits of his industry by having a lease in the premises. In conformity to the same principle, it may be urged, that a prudent tenant will not undertake any improvements of magnitude or expence, where he is not certain to occupy his farm for a sufficient period to reimburse him.

A well informed man, on my questioning him if any leases were granted in his parish, answered there were none. Under such circumstances, I naturally asked if they made any improvements on their lands, by draining, manuring, &c. His reply was, "they never thought of improvements beyond the customary mode of tillage;" and energetically added, "the man who would lay out his money on improving another person's property, without a lease, deserved to have a commission of lunacy taken out against him by his family, in order to restrain his actions." Nor was he singular in his sentiments, as I found on conversation with others.

It

It may likewise be observed, that a tenant from year to year, never feels that interest in and attachment to the premises he occupies, which is natural to a person that knows he has a term in them, and who, perhaps, indulges the hope that his sons, or even his grandsons, have a chance of profiting by what he has done. To the leaseholder it is a pleasing object to see buildings in good repair, to rear fruit and other trees, and to keep every thing in his possession in such a state, that he may not only derive a present, but a future gratification and advantage from his toils and his expences. To his landlord, as long as he can pay his rent, he looks up, not as a person of whom he is afraid, but as a superior whom he loves and respects; and the mutual tie of interest and good-will, thus uniting a good landlord with a good tenant, gives scope for every affectionate feeling, without lessening that independence of mind which is the constant source of independent and honourable actions.*

On the other hand it is argued, that granting a lease for a term of any considerable duration, is alienating one's property for the best part of a life, depriving the proprietor of any controul in the improvement and management of his estates, and exposing him to the risque of insult, of loss, of opposition, and ingratitude from a worthless tenant, who feels his consequence, and who has it in his power to render his landlord un-

* An intelligent correspondent observes; "that even to the proprietor there is a two-fold advantage in granting leases, which we ought not to overlook: he generally obtains a considerably higher rent, and he is exonerated from the expence of improvements, while the tenant is better satisfied, and manages his farm with a degree of spirit, which it would be ridiculous to expect under other circumstances."

comfortable,

comfortable, if not unhappy. It is contended likewise, that estates, when leased, always sell for a less sum than if tenanted at will, that no covenants can possibly be introduced into a lease which can be enforced without having recourse to a court of law, and that it is often more prudent to submit to a violation of engagements and unhusbandlike practices, than to be put to the hazard and expence of litigation. It is also argued, and with justice, that a land-owner granting a lease in advanced life is tying up the hands of his successor, and not only depriving himself of the contingent benefit of any rise in the value of land, but entailing the same disadvantage on his posterity.

Such are the principal arguments which I have heard advanced on this controverted subject. They are doubtless very strong on both sides; and no general rule can be laid down which will apply to all cases. Sound judgment and good sense in this, as well as in every thing else, must guide and determine.

It is certain, however, that to produce all the advantages which the system of modern agriculture offers, improvements must be made at the expence of some one, either of the landlord or the tenant. If the former declines the charge, the latter without a lease cannot in reason be expected to incur the risque. A middle course therefore seems to be advisable; and determinable leases at seven, fourteen, and twenty-one years, which are becoming very common, in the eastern parts of this county more especially, seem to combine all the advantages, and to obviate all the inconveniences which can arise from the practice of leasing. A good tenant runs no risque of being turned out by his landlord at the expiration of the first seven years; and a good landlord has little to fear from having his bargain thrown

thrown on his hands, before the lease has run its length. But as exceptions to this rule will occur from caprice or accidental disagreement, the tenant ought to be allowed half his disbursements on any beneficial improvements, mutually agreed on,* if the lease is declared void by the landlord at the end of seven years; but if it continues to fourteen, the whole expence should be borne by the tenant, who in that space of time must have been able to reimburse himself. A stipulation of this kind is made by C. Russel, Esq. of Binfield, and some other gentlemen; and it deserves to be noticed as a just and equitable measure.

In the dairying parts of the county, more particularly, I found few or no leases were granted, and certainly under such circumstances of occupation, they are much less necessary than on arable farms; and I have seen as much comfort and apparent security among Mr. Loveden's tenants, who grants no leases, and whose estates are chiefly of the description just mentioned, as in any part of Berkshire. The character of the man, the nature of the bargain, and various other considerations are to be taken into the account, before it can be decided on any just principles, as to what is right and wrong, in regard to granting or withholding leases.

It should be remarked, however, that except some old leases of twenty-one years, nearly expired, I found few recent instances of so long a term, certain. Fourteen years appears to be the longest term granted within the last seven years, and I heard of several leases for

* For this purpose, a proper person or persons should examine the state of the farm on the tenant's entering, and deliver in a written report, which might be referred to, and compared with, its existing circumstances, on any intended change.

only

only five, seven, or ten years certain. The prevailing practice undoubtedly is determinable leases, at the option of either party, for seven, fourteen, and twenty-one years.

In regard to covenants, I heard of nothing very peculiar in this county; and indeed they are often vague at best, or must be enforced at an expence frequently incompatible with the object to be attained. Liberal conditions are always most eligible for both parties, as being most likely to be observed. It is impossible without injustice to tie down a tenant to a specific mode of management in every particular, till near the expiration of his term; and then if he has not renewed his lease, policy requires that he should not have it in his power to injure the land. Seasons will controul the best endeavours and the most upright intentions; and as a tenant must obtain a crop to be able to pay his rent, it is fair that he should be allowed to vary his rotation of crops accordingly, provided he does not injure the soil, which he is little likely to do while he has a term of some length to run.

Perhaps a corn-rent might in many cases be adopted by land-owners, the same as colleges and ecclesiastical bodies, which would be the means of obviating the general prejudice against leases of any length. I must confess there is a strong bias on my mind, from all I have seen and heard, in favour of leases of some kind or other; determinable are certainly liable to the fewest objections, and are calculated best to reconcile the mutual interests of the landlord and tenant, which cannot long be different, without prejudice to both.

From the most accurate calculations I have been able to make, about one-third of the whole county is occu-

pied by the proprietors of the soil, and it is only to the other two thirds, that the arguments for or against leases can apply.

SECTION VI.—EXPENCE AND PROFIT.

Though this county is distinguished for the number of its intelligent and independent cultivators, and though I was particularly anxious to obtain some accurate estimates of expences and profits, I found it impossible to succeed. Several keep a correct account of expenditure; but on a farm, it is scarcely possible to strike a balance annually, and without this, how vague must every calculation be!

Besides, so much depends on judgment, industry, and capital, that one person will make double the profit, with those advantages, which another will, without them. It is not always the nature of the soil, or the quantum of rent, that makes a farmer successful or otherwise: under the most favourable circumstances there are failures, and under the worst, there are instances of doing well.

By the most sensible men who occupied their own property, it was admitted, that an average clear profit of ten per cent. on the capital employed was a fair return; and if so much is saved, after the necessary deductions are made for the expence of living and outgoings, the tenant will have no reason to complain, nor ought the proprietor of the land to envy those reasonable advantages. Few employments are subject to more casualties than farming, and few require more uniform attention. The rise of rents has doubtless increased

poor

poor rates, enhanced the price of provisions, and has consequently had a considerable effect on trade and manufactures.

I am not therefore convinced, that the proprietor has gained any thing by the late rapid advance, while the public has probably lost much. It is like imposing a tax on some article of general use, which is always doubled to the consumer. Not that I think the rents in this county are comparatively high: I know the contrary to be the fact; and it is not to be supposed that individual proprietors will forego the advantages which others enjoy, and for which they can have no other adequate compensation. It is the principle only to which I refer, and I leave the ulterior discussion of this point to others.

CHAP V.

IMPLEMENTS OF HUSBANDRY.

THOUGH there is a strong attachment to established habits, and to the old implements of husbandry, more especially among the farmers of the Vale, yet in every part of the county more enlarged ideas begin to prevail, and prejudices to die away; so that it becomes probable, in the space of a few more years, the improved instruments of agriculture, as far as they are adapted to soil and situation, will supersede the use of some, which, in many cases, appear to have little more than custom to recommend them. From the number of new implements, whose inventors are soliciting the public attention, often with more zeal than knowledge, the judicious and enlightened farmer will select such as he finds calculated to answer his purpose, and his less informed neighbours will copy his example.

1. CARRIAGES.

The Berkshire waggon is generally admired for its peculiar lightness and elegance, and though it varies a little in its construction in different parts of the county, it combines, according to Mr. Pearce, the three great requisites,

requisites, easy draught, strength, and a facility of being loaded and unloaded, from its being low built.

Nevertheless, the same gentleman proposes an improvement, which I believe is partially adopted, of leaving the space sufficiently deep in the bed of the waggon for the forewheels to lock round in the shortest curve, by which means less time would be lost in turning at the ends of swaths in harvest, without in the least affecting the symmetry or strength of the carriage.

On this, however, some farmers of the Forest district remark, "that the waggon would be much weakened by the proposed alteration;" and they add, "that an improvement has lately been made on the waggons of this county, which is found to answer the purpose of the suggested alteration, and that is the locking-chain, as it is called, namely, a chain from the pillar of the waggon, to about six inches before the middle bed stay, which is made of such a length, as effectually to prevent the waggon catching on the lock." Where the beds of the waggons are straight, as is common in the southern parts of the county, the improvement proposed by Mr. Pearce would probably be useful; in the Vale and middle parts, the beds are otherwise constructed, and scarcely admit of alteration for the better.

I noticed, however, an useful improvement in the draught of waggons and carts on the farm of S. Nicholls, Esq. of Hinton House, who copied it from the cars in London. Its object is to prevent the draught of the trace horses pulling down the thiller, which is always the case, when they draw from a drail in the fore part of the shaft, if the thill horse is taller than the trace horses, or if the latter are going down a declivity, before the former has passed its summit.

The

The preventive is by inserting a chain to the hinder part of the shafts, which is attached to the fore part of the shaft (where the drail is generally placed) by a piece of chain, which allows it to move freely to a certain distance from the shaft, that the draught may be always horizontal, as in the following sketch.

The drail being in the usual method placed at *a*, it will be obvious that the trace horses cannot draw horizontally, if the point of their shoulders be upon a level with the trace *b*; but in that case, the thiller, over whose back the ridge tree *c* goes, in order to support the shafts, must endure a considerable pressure, which the proposed improvement would remove.

Mr. Loveden, whose name is so often mentioned with deserved respect in this Report, puts narrow fore-wheels to his waggons, and broad behind, in order to prevent injury to tender grass land. The hind wheels roll over the track made by the fore, and cancel the mischief they have done. The plan is excellent, and of easy application.

The carts are generally on a good principle, though perhaps too heavy. The introduction of light single-horse carts, for various agricultural purposes, has been recommended by able judges, as preferable to the general use of waggons, on the score of utility as well as economy.

2. PLOUGHS.

2. PLOUGHS.

Mr. Pearce's strictures on the Berkshire two-wheel plough, which is described "as a heavy, clumsy, instrument, with a massy beam, share, and mould board, much better adapted for trenching than the uses required," and his recommendation of the Norfolk wheel plough, and the Suffolk iron swing plough, drew, from some intelligent cultivators at the time, the following remarks; and I have observed that the belief in their truth is not yet generally shaken.

"With respect to the plough," says a farmer of the Newbury district, "it is very true there may be an acre of land ploughed in a day by two horses and one man, in many parts of the county, particularly on the light sandy soils, but on the strong red clay land, more strength is certainly necessary. I have frequently put five horses to a plough, and they have drawn hard to turn up three quarters of an acre in a day, so that if the plough was not strong, it would be torn to pieces. I cannot condemn the Suffolk iron swing plough,* because I have never seen it, but I hope some gentleman will introduce it into this county, and if it answers, it will be a great advantage on strong soils, even if it should require three horses to work it."

"As to the swing plough," observes another gentleman of the Maidenhead district, "there are certain times when it will go best, that is, when the clay land is very wet; but at other times the swing plough will not do, for want of sufficient weight to keep it down; and this is found by experience to be a matter of fact,

* I did not find this plough in use at the time of my survey.

The

The great improvement wanting is, that farmers should have two sorts of ploughs,* the large ploughs for strong land, and the small ploughs for light land, as it is impossible that a smaller number of horses should plough that sort of land the depth it is required. In light land, three horses will often do, and sometimes two, where the soil is sandy and shallow; but the swing plough will not answer where there are many stones in the land.† As for going without a driver, which Mr. Pearce recommends, it seems to be a bad plan, as the plowman cannot turn in and out at lands-end so well without one, neither will the horses go so steady in their work; besides, if there were no boys to drive ploughs, there would soon be very few plowmen; for the boys are taught to plough by occasionally being permitted to hold; and it is bringing them up in the way they should go, and not only so, but it is a great help to a labouring man to have his sons employed as soon as they are able to work."

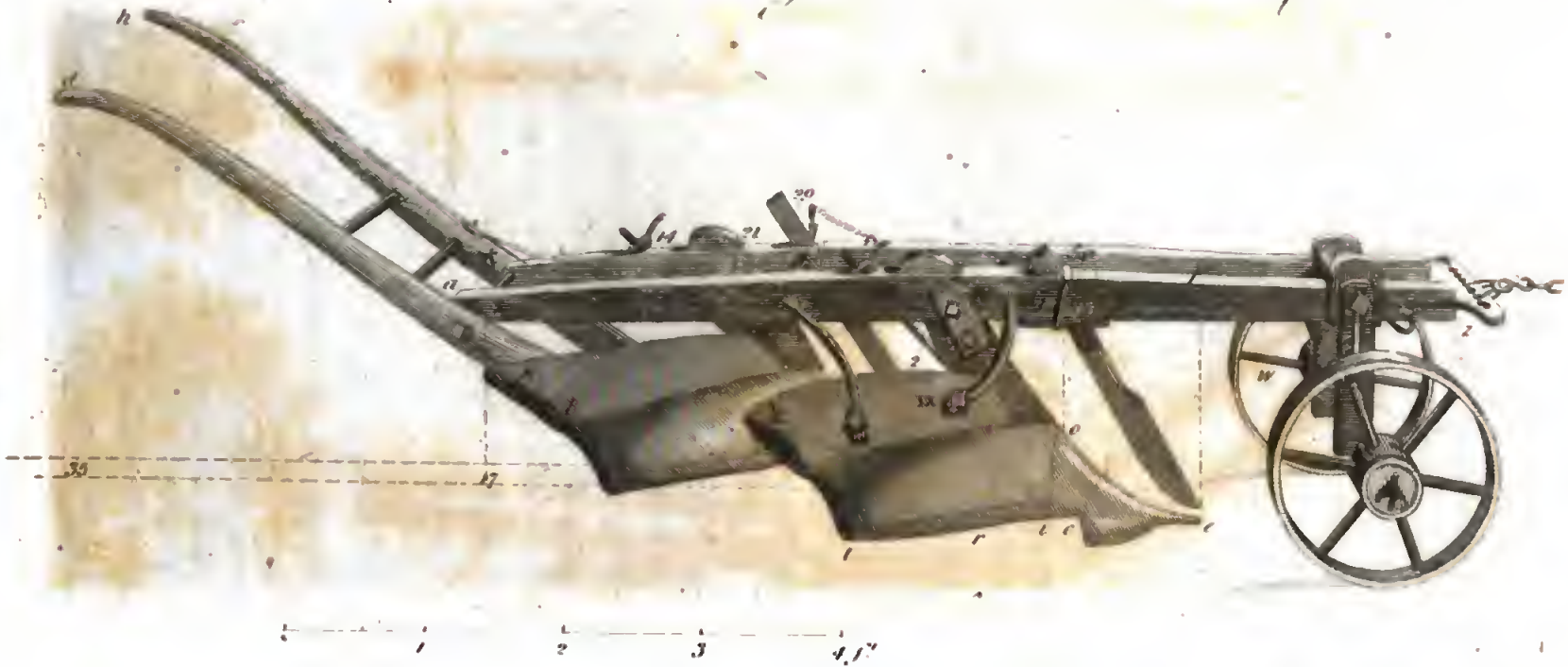
"Experience," say some gentlemen of Reading district, "has by no means convinced the Berkshire farmer that four horses to a plough are unnecessary. Two horses, indeed, on a loose soil, and in the barley seed time are often found sufficient; but on strong or stony land, four horses even to a light plough will be found to labour more than two horses on a light soil. The wooden swing plough has been frequently tried on strong land, but without success. Where there are very few stones, and the land will cut, the preference is

* To this opinion the reporter heartily subscribes; but so strongly are many wedded to ancient custom, that the same kind of plough and the same strength are used indiscriminately on all kinds of soil.

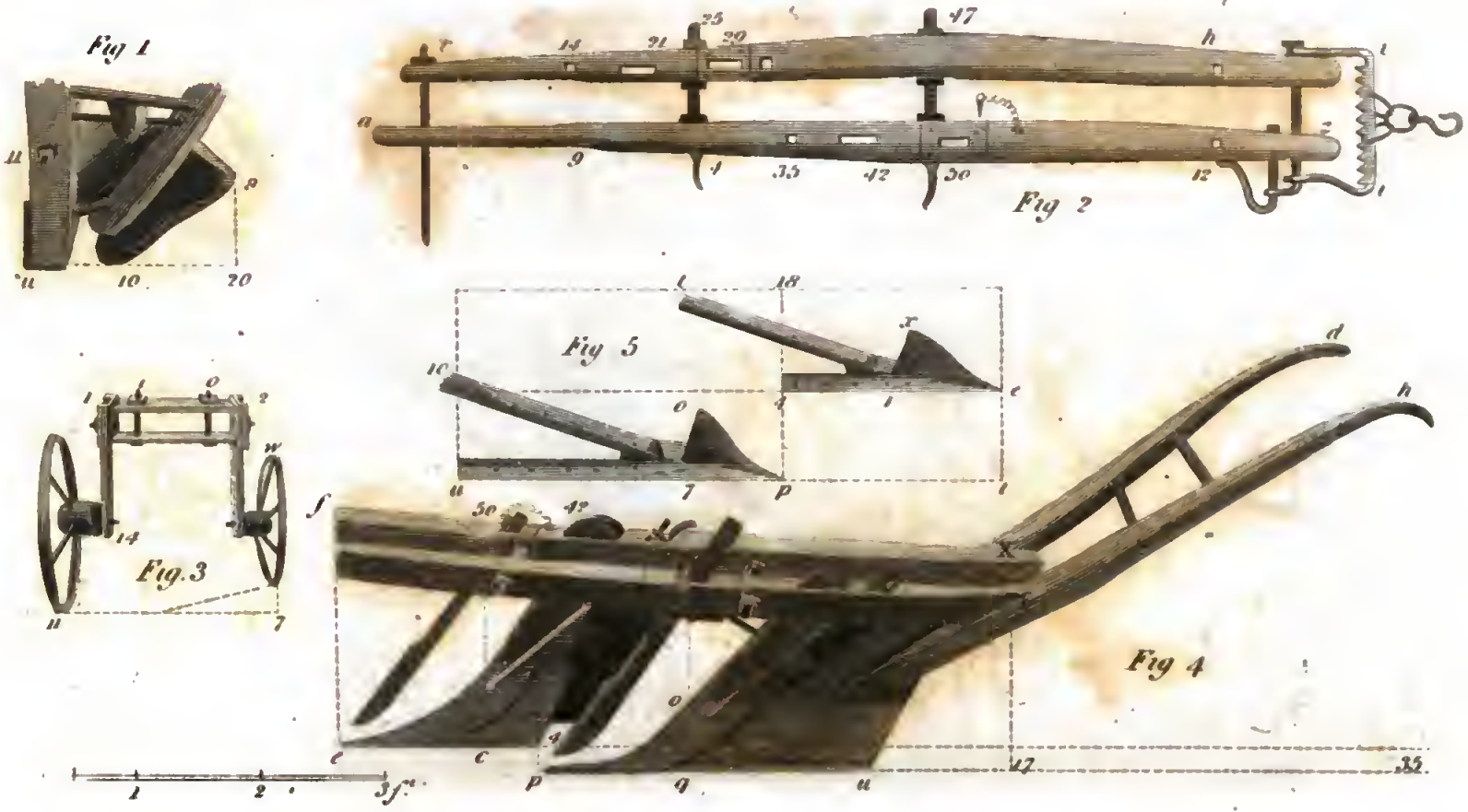
† Certainly not; but the chain plough might in that case be employed to advantage.

given

A Leicester double Plough at C. L. Loveden's Esq.r



Berks. Parts of the Leicester double Plough, at E. A. Loveden Esq.^{rs} 2.P. 121.



given to the swing plough; but the saving of the expence of a boy to drive plough, as it is termed, is not admitted to be a real advantage."*

The committee of the Forest district remark, "our ploughs are conceived to be well adapted to the nature of our strong soil; for it is the received opinion, that deep ploughing is necessary, which cannot be effected but with a strong implement; and the Suffolk iron plough has not been found to answer where it has been tried. We can plough an acre, or an acre and a quarter, *well* with four horses; and we do not find that the Norfolk plough, where it has been tried in the neighbourhood, even on a light soil, with three horses, can do little more than half the quantity in as good a manner."

I felt it my duty to retain these arguments in favour of the two wheel plough, though convinced of their fallacy in several respects. On the authority of well informed men in different parts of the county, I am able to state, that this implement is now as much used to humour the prejudices of the plowman, as because his master thinks it necessary to till his land properly. With a two wheel plough, the holder may stare round him, crack his jokes with the plowboy, or even occasionally ride on the stilts, that the horses may have still a stronger draught; while with a swing or a chain plough, his attention must be constantly directed to his business.†

Mr. Loveden's ploughs are usually made in Leicestershire, some with two shares, others with one, some

* See the preceding paragraph for the reasons.

† With the heavy Berkshire two wheel plough, four horses, two abreast, are commonly used when the land is pretty dry; or four at length, when wet, sometimes five!

with

with a wheel, others without, and are used according to soil, &c. The two share plough is getting into use in his neighbourhood, and in other places on the side of the White Horse Hills, or where the soil is not very tenacious. At Letcombe Basset, a plough of this kind, with two wheels set wide, and made by Radway, of Cirencester, is much approved of. It is drawn, however, by four horses.

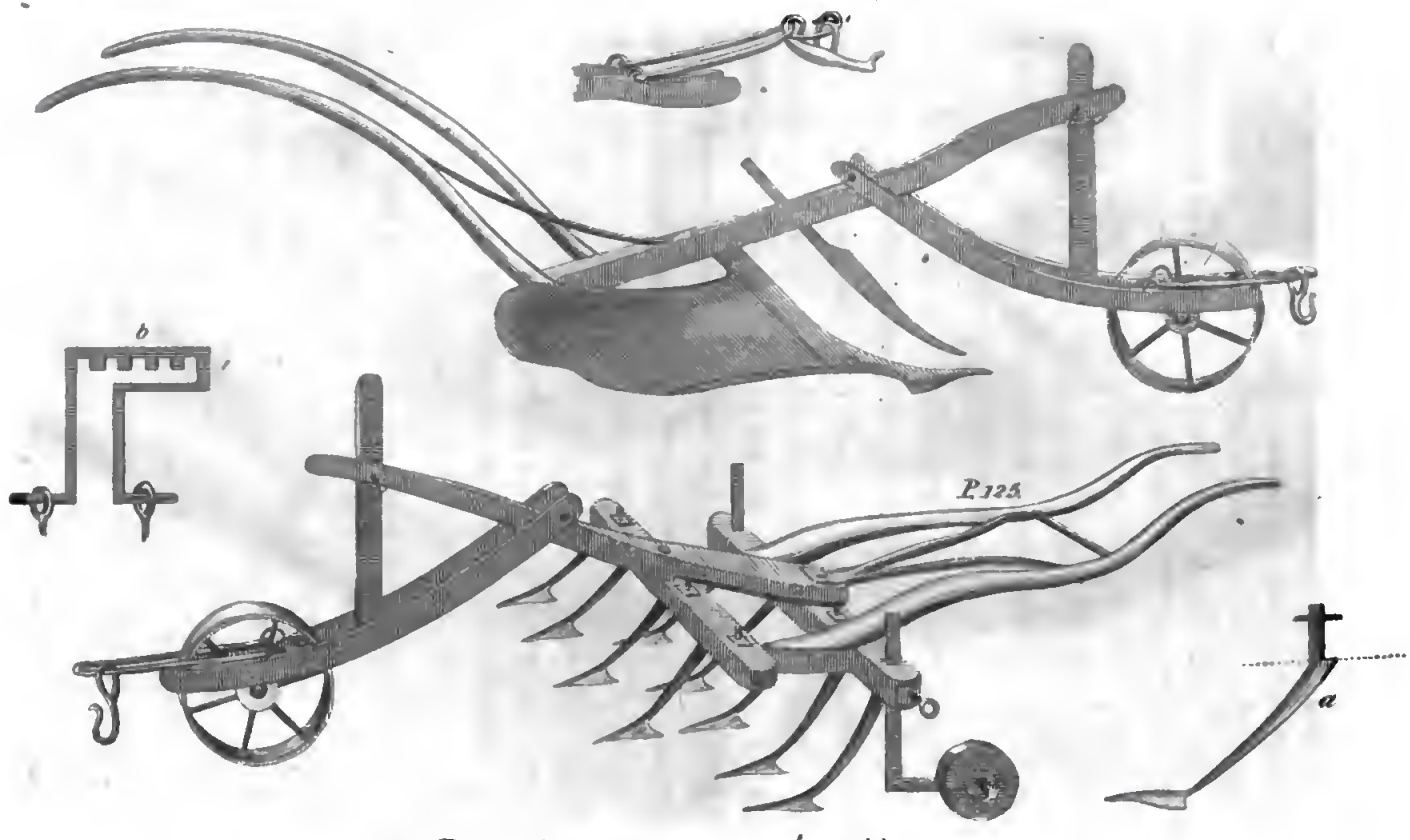
In several parts of the county, particularly about Hurley, the one wheel plough, usually called the Hurley, or Hinton plough, (see the drawing) begins to be used; and as it is considerably lighter, and found to do the work equally well, the draught of one horse out of four may be saved in many situations. It was first introduced by Mr. Nicholls, of Hinton House, in the parish of Hurst, to whom I am obliged for the sketch. Mr. Thomas Micklem, of Hurley, and Mr. H. Selwood, of Aldworth, as well as several other intelligent agriculturists, speak highly in its praise; and it is likely, by degrees, to supersede the old fashioned plough, at least to a certain extent.* For it would be absurd to suppose, that one kind of plough, whatever advantages it might possess, is adapted to all the various soils to be found in this county.

Mr. Harbottle, of Remenham Farm, uses the Rotheram, or swing plough, with two horses, and no driver.

* "This plough, drawn by two or three horses, performs its office remarkably well, turning the furrow well over, and ploughing clean from one acre to one acre and a half per diem, with great ease to the horses."—Mr. Nicholls. As a proof, however, that even the two wheel plough on a soil not too stiff, may be used with some degree of economy, I saw a man ploughing with one of them, having only two horses abreast, and no driver. His work seemed to be well done, and he made no objections to the mode; but he was the farmer himself!!

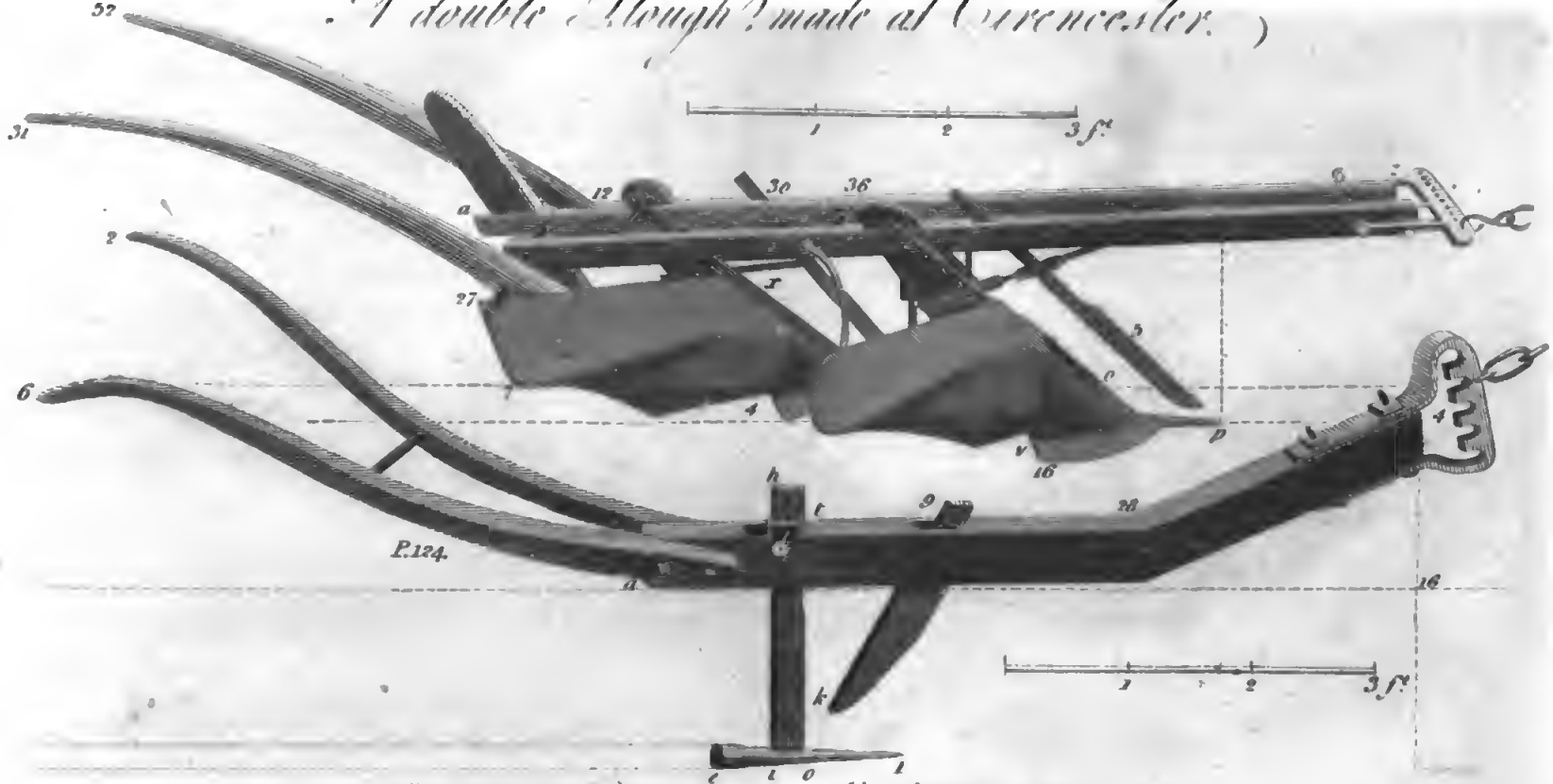
The

The Winton Plough

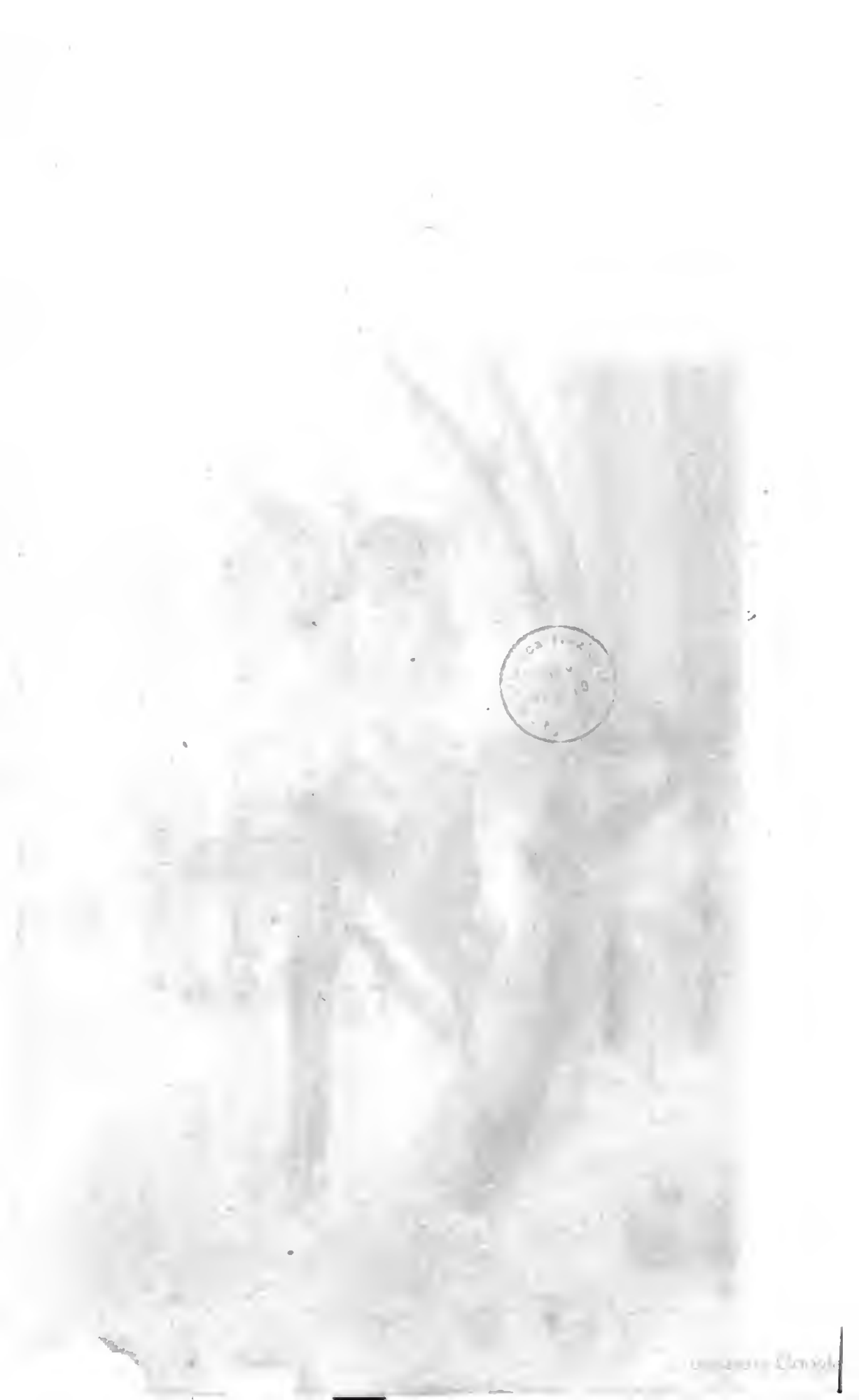


The Winton Scuffler.

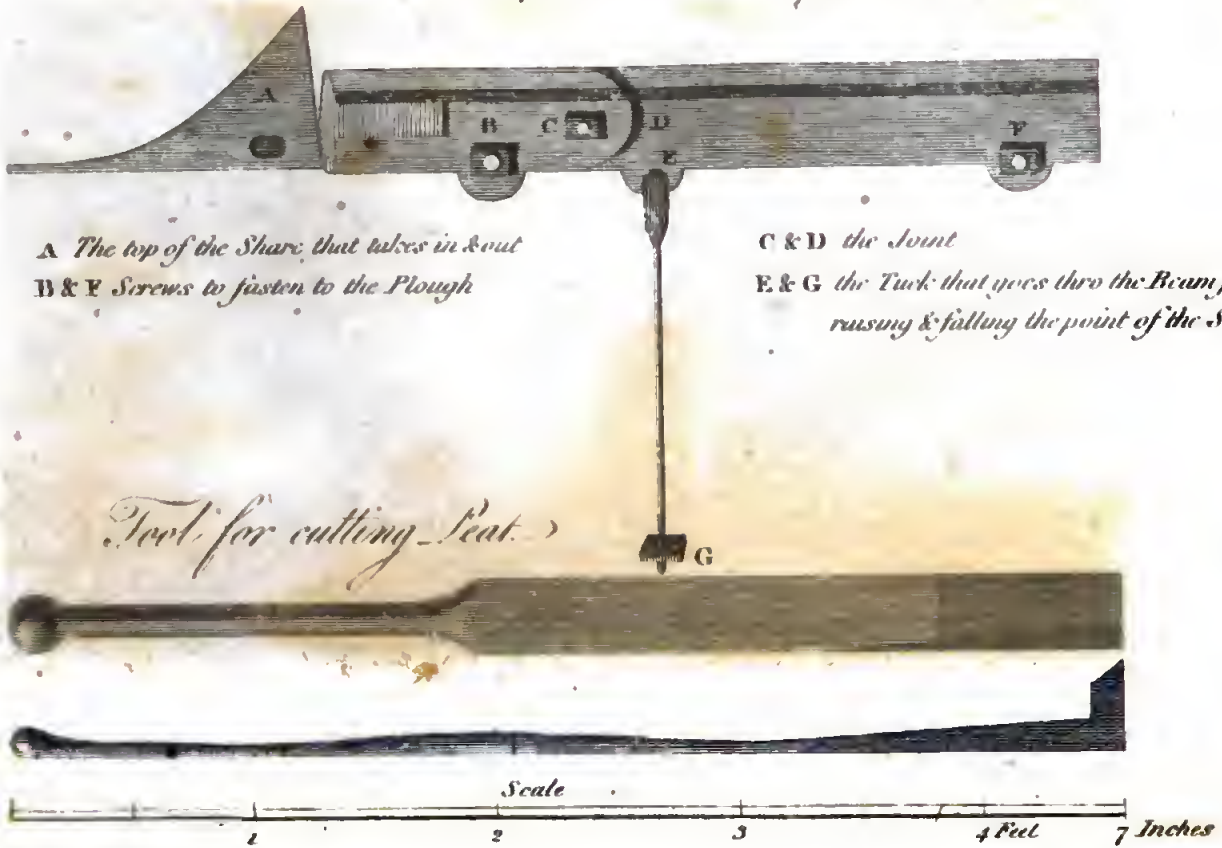
A double Plough, made at Cirencester.



A Mole Plough, at E. L. Loveden's Esqr.



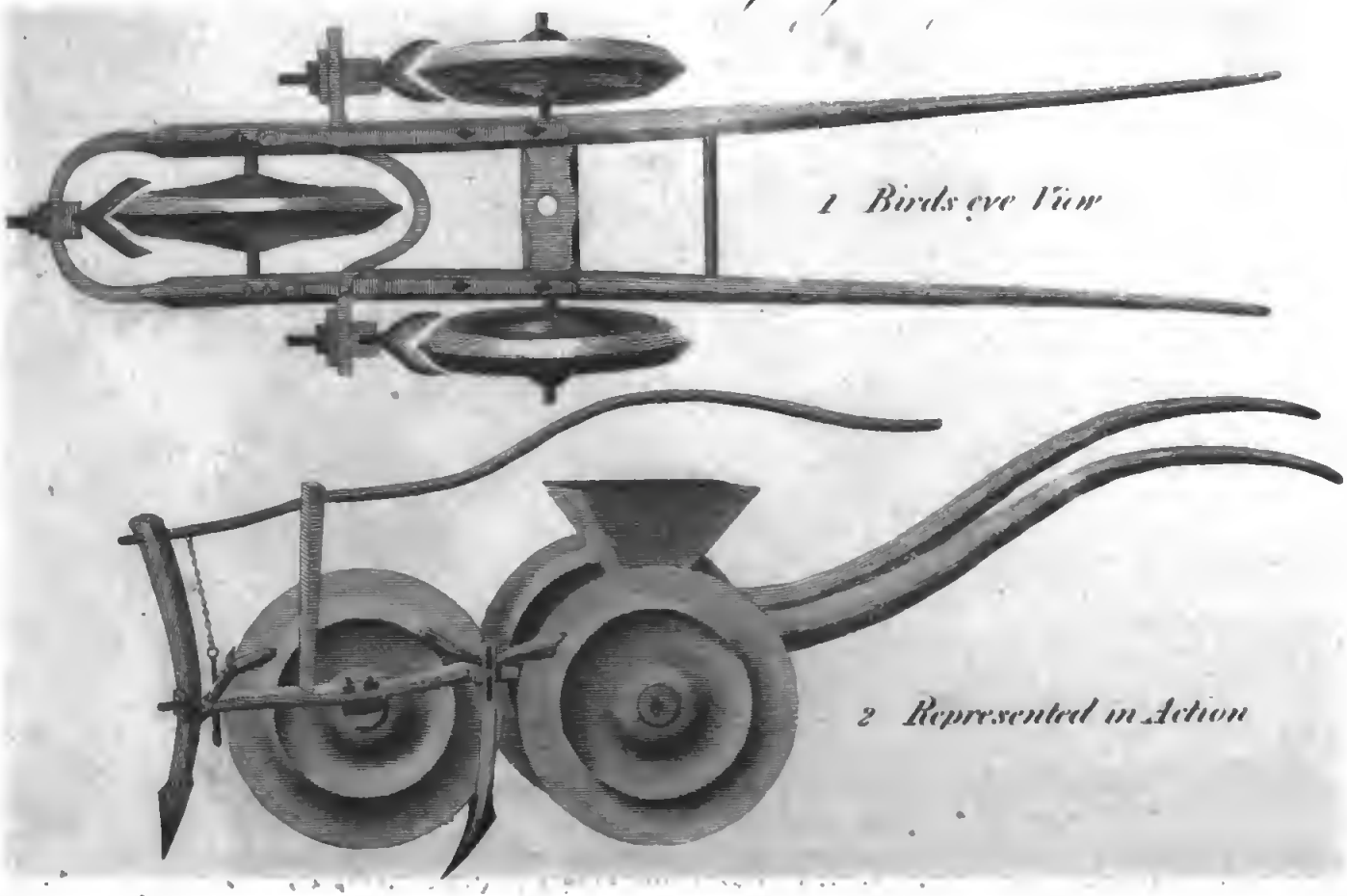
W.W. Moreland's improved Plough-Share.



A *The top of the Share that takes in & out*
B & F *Screws to fasten to the Plough*

C & D *the Joint*
E & G *the Tuck that goes thro the Beam for raising & falling the point of the Share*

Mr. Berriman's Pressing Plough



Neele sc.

The soil is sandy loam and flints, with a substratum of chalk. He is a native of Northumberland, and follows the system of that county; and I trust it will be found successful in this; but as an innovator, he would have had difficulties to contend with, had he not brought his servants from the North with him. I saw his teams at plough, and the work appeared well done; but because it was executed with half the usual strength, some of his neighbours called it half ploughing. I hope, however, he will not have half crops, and then the advantage will be on his side.

Cast-iron ploughshares, from their cheapness and durability, are becoming common. On these, Mr. W. Morland, of West Ilsley, has made a simple but very beneficial improvement. (See the Plate.) It is well known, that when the point, or sock, of worked iron ploughshares wear out, they may be renewed; but in cast-iron, the case is otherwise. By Mr. Morland's invention, however, which was much approved of at the last Berkshire Agricultural Meeting, the blunted point may be dipped in such a manner as to produce every desirable effect, after the share would have become useless without it.

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3. PRESSING PLOUGH.

Mr. Berriman, an ingenious mechanic of Speen, in this county, some time since invented what he calls a pressing plough, which is much valued by those who have given it a trial. Among others, Mr. R. Tull, of Chamber House, speaks highly of its use on clover leys, more especially.* It is a patent invention, and

* In a letter lately received from Mr. Tull, he says, "I have used the pressing plough much since I saw you, and approve of it highly."

costs

costs about twelve guineas. "This machine," says the patentee, "is intended to be drawn over land recently ploughed, in order to press in the grips or channels made by the common ploughs, that no hollow places may remain for the seed to be buried too deep, and that every kind of grass, stubble, or any thing else, may be pressed into the ground. After the field has been pressed, almost any kind of seed may be sown by broad cast; and it will, by rolling into the channels of the pressing wheels, be evenly and equally buried at a proper depth, after being harrowed, and consequently be kept out of the way of birds, and will come up more regularly. It is evident, therefore, that there is no necessity for sowing so much seed to an acre, as in the common broad cast husbandry; thus combining the advantages of the drill and the broad cast systems. This machine is also of such a construction, that in the most uneven ground, every wheel acts as fully and amply as if it were drawn over a level surface. One of the pressing wheels, with or without the tine before it, may be put before a common hand drill, and drawn by one horse, by which means any ground, however foul, may be drilled. Or a drill may be added to the pressing machine, above described, with three wheels, so as to throw the corn into the channels. Fig. 1. is a bird's eye view of the pressing plough. Fig. 2 represents it acting as a drill, as well as a pressing machine.

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4. MOLE PLOUGH.

Mr. Loveden, of Buscot Park, who is distinguished for the variety and utility of his agricultural implements, has a plough of this kind, by Lumbert, and improved by himself, which is drawn by one horse, and sometimes

Berks.

Fig. 1

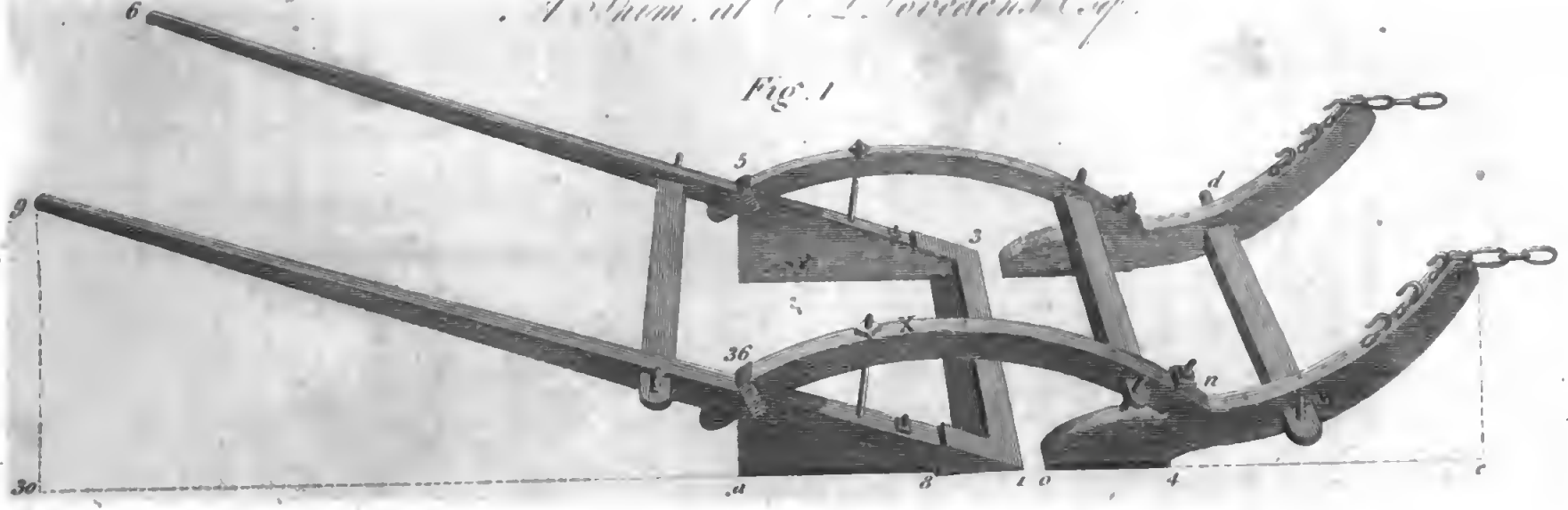


Fig. 2

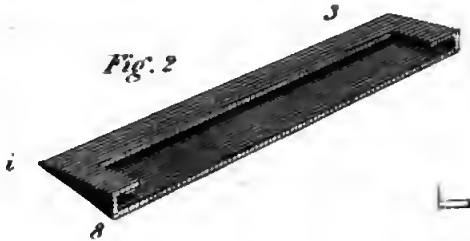
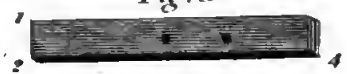


Fig. 3



sometimes by women, as occasion requires. It is an instrument well adapted for forming temporary drains, particularly on grass lands with a descent, and where it is wished to preserve the neat appearance of the surface. It may be applied, however, to various other purposes, and in different situations, where it passes through clay or strong loam; but if the substratum is sandy or gravelly, it is obviously useless. See the Plate.

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5. NINE SHARE PLOUGH.

Instruments of this kind, containing five, seven, or nine shares, are beginning to gain ground in the Chalk district more especially, where the soil is light, or easily friable. Mr. Tull, of West Ilsley, and some others, use them with the most beneficial effects. After the land is properly manured, ploughed, and rolled, he passes the nine share plough over it, and sowing broad cast, harrows in the grain, which comes up with as much regularity as if it were drilled: and in many situations and soils this implement would be, no doubt, found preferable to the best drill machines.

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6. CULTIVATORS, SCARIFIERS, SKIMS, SCUFFLERS.

Implements of this description on different principles, and to answer different purposes, have for some time been employed by experimental farmers, and are daily getting into the hands of others.

The *Hinton Scuffler*, as improved by Mr. Nicholls,

is

is an useful instrument.* The tines, as at *a*, are set to rake or project forward at an angle of 45 degrees. The hind wheels are put up to any height required, in proportion to which they admit of the tines burying themselves to the depth they stand below the wheels. The cock by which it is drawn is of iron, and is represented by figure *b*. See the Plate.

Mr. Loveden has an excellent shim, or skim, made many years ago, under his own direction, which operates like a breast plough. It is drawn by a team of horses, and shaves off remarkably well and expeditiously a bean stubble.

7. DRILLS.

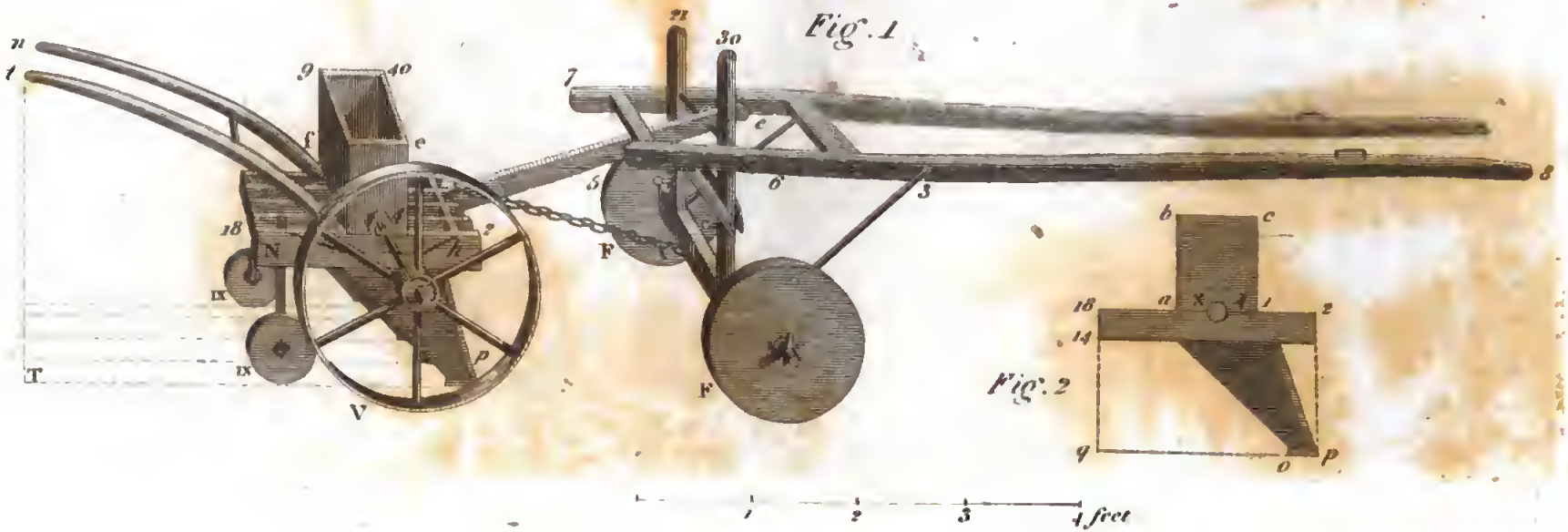
Sir John Throckmorton, Bart. O. Williams, Esq. M. P., and some other gentlemen, use drill machines for grain as well as pulse; but the practice is not common in this county. In the parish of West Shefford, a five share drill is used with all kinds of grain when the land is clean. In the parish of Arborfield, Farmer Crease uses a drilling machine of his own invention, which is found to answer. It makes ten drills at once, covering five bouts, or eight feet six inches. The small

* "The scuffler thoroughly cleans and stirs the fallows to any depth, goes with four horses, and scuffles six acres a day. It is of material use to get in the seed of barley, oats, or wheat, on a stale furrow."—Mr. NICHOLLS. In the parish of Clewer, I observed a scarifier by Whitley, of Reading, working on a bean stubble, covered with polygonum. It soon became clogged, which, on Mr. Nicholls's principle, it would not have been.

The scarifier used by Mr. Stevens, of Binfield, to which he applies two plough wheels, costs about seven guineas, and works well. Five tines stand before, and six behind, filling alternate spaces.

turnip

Mr. Mathews five share Wheat drill.



Berkshire common light Harrows.

Fig. 1

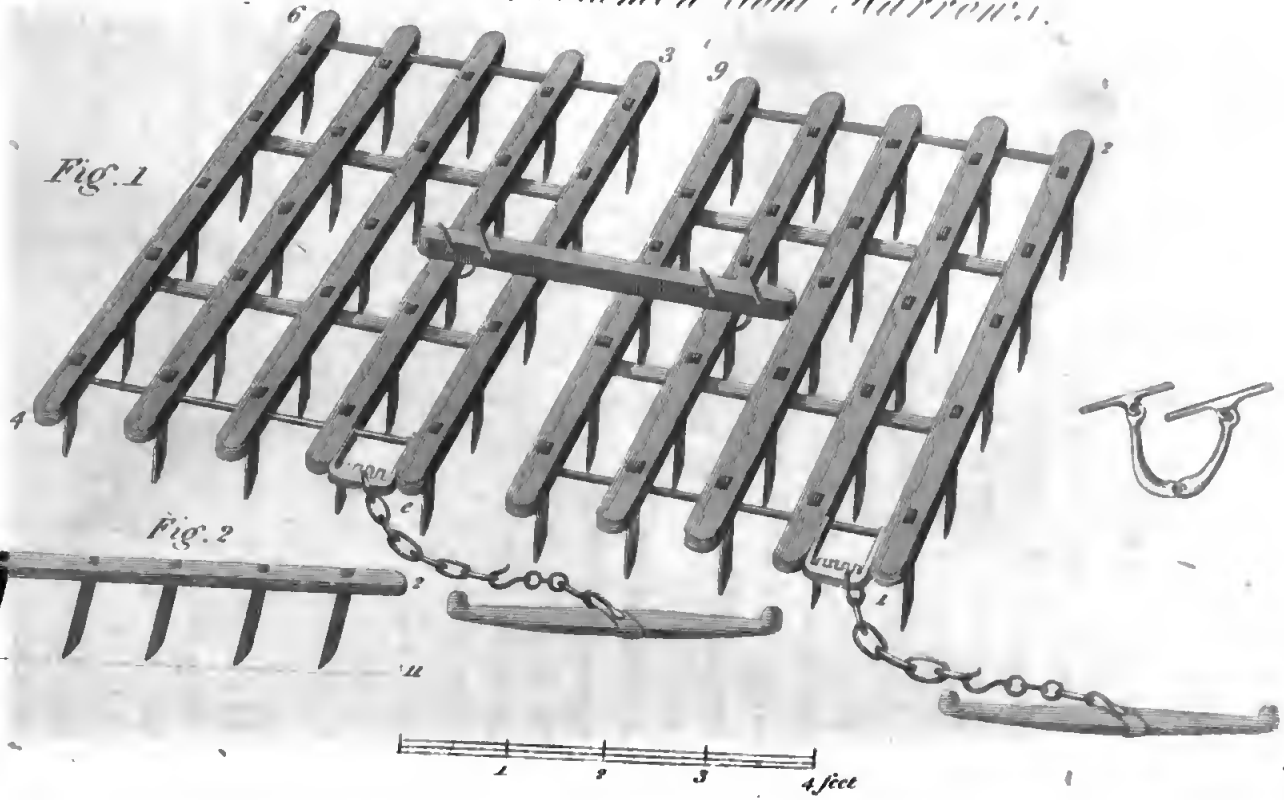


Fig. 2

turnip drill which I saw at Mr. Harbottle's, Remenham, is a simple, unexpensive, and useful implement.

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8. ROLLERS, &c.

The common rollers of Berkshire differ in nothing from those of the neighbouring counties. Mr. H. Selwood's wheel roller, however, of which a drawing is given, is a powerful and efficacious machine on light soils. It is drawn by four or more horses, and is successfully applied to the rolling of wheat after sowing, particularly on clover leys. It saves much labour in harrowing. Its use is gradually spreading over the parishes near Aldworth, where the soil naturally requires pressure.

Mr. Selwood has likewise a very useful machine in the form of a water-cart, which is used for spreading on the land the liquid part of the farm-yard dung, which is too frequently lost. See the description of his farm yard.

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9. HARROWS.

In the construction of the harrows, or in the manner of using them, I did not observe any thing peculiar. They are generally made square, and drawn diagonally. About Reading, however, Lisler's patent harrows, which cost five guineas a pair, are getting into use, and are generally approved.

10. CHAFF-

10. CHAFF-CUTTING MACHINES.

The largest and most powerful chaff-cutter, and which can only be adapted to a farm of superior magnitude, is that belonging to Mr. Loveden, which cost sixty guineas, is worked by one horse, and will cut sixty bushels of chaff in an hour. It is a very complete machine; and experience proves that it does its work excellently. By its assistance, this gentleman has all his hay cut into chaff for his farm horses and cattle, whether fatting or store. It is calculated that it saves nearly one-third in the quantity of hay used, and that the cattle thrive better, from having more time to rest. It works a mill for splitting beans at the same time, if required, with little additional labour to the horse.

Sir John Throckmorton has Burrel's chaff-cutting machine with two knives, which costs twelve guineas. Chaff-cutting machines, of various constructions and of different powers, are generally used in the county, as it is found advantageous to mix chaff with the oats given to working horses. Scarcely a farm but has some machine of this kind. Lister's patent chaff-cutter, price thirteen guineas, is introduced about Reading, and found to answer.

WINNOWING MACHINES.

The common flap winnower, which from its rudeness seems to have been invented within a century of the Deluge, is not yet discarded; but Cornforth's, which costs from eight to twelve guineas, and requires two men

men and one boy to work it, seems to be much approved by those who have tried it. Other machines of the same kind, by different makers, particularly by Baker, are yearly getting into use; and in a short period of time it is probable that the economy of the barn will undergo a total change.

It is not unlikely that other improved implements of agriculture may be used by individuals in different parts of the county; but I trust it will be found that I have particularized the chief of them, and shall therefore conclude this chapter with a detailed account of threshing machines now in use, within the limits of my survey.

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12. THRESHING MACHINES.

Within the last two or three years a considerable number of threshing machines, on different principles, and of different powers, have been erected in Berkshire, the principal of which I shall notice, with some particular observations on that belonging to Mr. Harbottle, of Remenham Farm, a man who is introducing the Northumberland and Scotch mode of agriculture with spirit, and apparent success, and who in consequence will probably become a benefactor to the county in which he has taken up his residence.

Mr. Harbottle's machine was made by Mr. Michael Elliot, of Hexham, Northumberland, and cost about 200*l.* besides the additional buildings, which amounted to about 100*l.* more. It was put up in eleven weeks. The place in which it is erected was an old barn, of which one side was taken down and rebuilt, with a

wall, as in the annexed drawing,* two feet thick at bottom, and twenty inches at the top.

The machine consists of a horse-wheel containing 136 teeth, a pinion wheel 27, large wheel, 88, another 21, ditto 88, a fourth ditto, ditto 21, forming the drum. Underneath the drum is the winnowing machine, or wheel that separates the chaff from the corn, by blowing the chaff back into a bin below the feeder, and allowing the corn to fall into a box from whence it runs. Every revolution of the horse-wheel produces eighty-eight and a half of the drum; and as the horse-wheel goes about three rounds of twenty-four yards each per minute, or two miles and a half in an hour, the drum of consequence must revolve on its circumference of three yards and a half, 265 times in a minute, or 927 yards.

It should be observed, that the drum of threshing machines in general revolves from 60 to 100 times for one revolution of the horse-wheel; and in proportion as the drum moves slower, the horses must go faster, so that the utmost nicety is necessary to adjust this; for if the horses are obliged to trot, they are injured by long continued exertion; if they move too slow, the work is not so effectually done. A common walk is the pace at which horses should be kept, and the drum should be formed accordingly, in order fully to do its office, and to enable the horses to perform a good day's work, without extraordinary fatigue.

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* For the drawing and the calculations I am indebted to Mr. Allnutt, of Henley on Thames, as the machine was not finished when I visited Remenham Farm.

Compa-

Comparative Calculations of Expence and Saving.

1. Mr. Harbottle's machine will thresh twenty quarters of *wheat* in twelve hours, in great perfection, and requires the following hands:

	l.	*s.*	*d.*
A man to feed the machine with sheaves, at per day - - -	0	2	6
A woman to throw up the sheaves into the sheafshelf, at ditto - -	0	0	8
A girl or boy to hand and unbind the sheaves to the man that feeds - -	0	0	8
A man to riddle, or sift, the corn from cockles, or small chaff - - -	0	2	6
A woman to assist him - -	0	0	8
Two men to remove the straw, and to make it up in bundles, at 2*s.* 6*d.* -	0	5	0
A boy to drive the horses, and to attend to their paces - - -	0	1	6
Making in all eight persons -	0	13	6
Four horses, at 7*s.* 6*d.* each per day, a liberal allowance* - - -	1	10	0
Expence of threshing twenty quarters	2	3	6
Ditto by the flail, at 3*s.* 6*d.* per quarter, supposing a man can thresh a quarter in a day, which is too much - -	3	10	0
Saving by the machine in twenty quarters	1	6	6
Or by the quarter - -	0	1	4

* Mr. Harbottle has since stated to me, in a letter, that his calculation of expences was too high; but this circumstance operates still more powerfully in favour of threshing machines.

 2. The

2. The same machine will thresh in the like space of time thirty quarters of *barley*, at the subsequent expence.

	l.	*s.*	*d.*
Two men to feed and loose bands, at 2*s* 6*d*.	0	5	0
Two women to pitch up and supply, at 8*d*.	0	1	4
Two women to riddle, at 8*d*.	0	1	4
Two men to remove straw, at 2*s*. 6*d*. and one boy ditto, at 1*s*. 6*d*.	0	6	6
One boy to drive	0	1	6
In all nine persons	0	15	8
Four horses, at 7*s*. 6*d*. each	1	10	0
Usual price by the flail, 2*s*. 2*d*. per quarter } thirty quarters	2 / 3	5	8 / 0

Saving on thirty quarters 19*s*. 4*d*. or 8*d*. per quarter.

3. Of *oats* it will thresh forty quarters, as under:

	£	*s.*	*d.*
Nine persons, as for barley	2	5	8
Usual price by the flail 2*s*. per quarter,	4	0	0

Saving on forty quarters 1*l*. 14*s*. 4*d*. or per quarter 10½*d*.

In the threshing of all sorts of grain, whether by machines or by hand, much depends on the yield; and Mr. Harbottle is of opinion, that he could thresh twenty-five quarters, and upwards, of wheat, forty of barley, and fifty of oats, if more persons were employed, and the machine put to its greatest powers.

Mr. Allnutt observes on this, "I cannot think that the machine could thresh more than twenty-five quarters of wheat in twelve hours. In the usual round of work, which is the only fair criterion, I actually saw eight persons in three hours thresh about five quarters of wheat; but I really think, if an additional person had been employed in feeding, one sheaf more in every five

five might have been threshed. The horses, however, appeared fatigued, and the two men who were employed in binding the straw had only time to apply one band, which was ready made bye them."

Twelve hours is too much for one set of men and horses to be employed; and though this machine is certainly very powerful, and does its work much better than by hand, it is perhaps too heavy; though this circumstance, undoubtedly, renders it more durable. The wheels are principally of cast-iron; and the cogs, made of well seasoned white thorn, if broken, are easily replaced, and are on the whole very lasting. The management of the machine is easily learned; and little danger attends its use, except to careless hands.

Mr. Rogers, of Chievely, has a large threshing machine, worked by six horses; but my informant did not think it answered completely.

At Hurley, T. Micklem, Esq. has erected Freeman's machine, a two horse power, costs about 70*l.* employs three men and a boy, and in eight hours will thresh eight quarters of wheat, and fifteen of oats and barley. Pink Lee, Esq. of Wooley Green, Cookham, has a similar machine. In the parish of Bray, I heard of a large threshing machine, but did not see it, and therefore cannot mention its powers.

Mr. Palmer, of East Garston, has a large threshing machine, which has been erected several years, and was probably the first in the county. It cost about 400*l.* goes with six horses, and threshes about twenty quarters of wheat p r day.

E. L. Loveden, Esq. of Buscot Park, has one by Cox, of Fairford, which goes by hand, and cost about twenty guineas. I is easily portable, and with the assistance of six women, or boys, whose wages will amount

amount to 4*s*. 9*d*. will thresh twelve bushels of wheat in ten hours. This machine in its present form, is evidently more curious than useful. Without horses it is impossible to produce a saving.

The same gentleman has a machine, by Lumbart, which cost about fifty guineas, and in eight hours will thresh five quarters of wheat. It goes with two horses. The execution of this machine may certainly be encreased.

In the parish of Ashbury, there is a threshing machine turned by four horses, which will produce about twelve quarters in the day. Its work is said by some to be too expensive; but the same observation applies with greater force to several machines I have noticed.

W. Morland, Esq. of West Ilsley, has a one horse power threshing machine, which cost about thirty guineas. It cuts chaff at the same time, and threshes about twenty bushels in the day.

B. Morland, Esq. of Abingdon, has a two horse power machine, by Freeman, which threshes five quarters in eight or nine hours.

Sir John Throckmorton, Bart. of Buckland House, has erected a threshing machine, by Balls, of Norwich, which cost about fifty guineas, and is found to answer better than several of the preceding. In fact, it is little, if any, inferior to Baker's machine, in point of execution.

The Rev. R. Simonds, of Hinton, has a machine on the same construction, of which he speaks favorably.

R. Tull, of Chamber house, Thatcham, has a hand machine, by Balls, turned by four women, and which employs ten persons in all, though only one man is necessary. The only saving Mr. Tull finds in its use is in making reed for thatching, which is much more durable

durable and neat than when the straw is broken. The straw is drawn back as soon as the ears are threshed, instead of being allowed to pass through the machine.

In the united parishes of Sulhampstead, Abbots, and Bannister, W. Thoyts, Esq. and Mr. W. Stone, have erected threshing machines, by Baker, of Exeter, which are turned by four horses, and employ two men, and six women or boys. They thresh about twenty quarters of wheat in eight hours, and so in proportion for other grain. The work is performed very perfectly, and even the labourers seemed pleased with them, which is no small evidence of their value. The cost, including carriage and erection, is about 70*l*. I twice saw that belonging to Mr. Stone at work, and thought it superior in simplicity, cheapness, and execution, to any that ever fell under my notice.

In regard to the advantages attending threshing machines, they are by no means to be limited to the actual comparative saving, but various other considerations are to be taken into the account. In the first place, it may be observed, that the flail is an instrument only fit for the savage state; and that; barring accidents, a person using it constantly, is sooner exhausted by ten years, than in following any other branch of agriculture. Secondly, that confining several able-bodied men to the barn, is withdrawing their labour from important improvements on the farm, which cannot be performed without manual labour. Thirdly, that the threshing machine may be used at seasons when no other work can be performed, and will employ women and boys, as well as men. Fourthly, that by its use the farmer gets the advantage of markets, by being able to sell and deliver any quantity within a short time. And lastly, that by threshing and placing in a ecure

gnary,

granary, the loss occasioned by vermin is prevented. Several other beneficial consequences result from the practice of threshing by machinery, particularly in saving the expence of building and upholding several barns on a large farm; but I need not enlarge on this topic. I have little doubt that, in time, every considerable farmer will be furnished with one, as is usual in the North of England, and the more improved parts of Scotland: and it certainly would be much more for the interest of the land-owner to assist his tenant in the erection of such machines, than to expend his money in unnecessary buildings, which their general introduction would tend to diminish. I might add, that a parish threshing machine in a centrical situation would be no less useful than a parish mill, and that regulations might easily be adopted for rendering it a public benefit, or advantageous as a private speculation. In Northumberland, I understand, it is nothing uncommon to have a threshing machine of this description; and for small farmers in all counties it would be a desirable acquisition. The same waggon that brought the corn to be threshed, might carry back the straw; there would thus be little waste of labour, and the saving would be considerable.

CHAP.

CHAP VI.

ENCLOSING, FENCES, &c.

1. THE importance of enclosing is now so generally allowed, its beneficial effects so well understood, that it would be idle to expatiate on the subject; * and it is only extraordinary, that so many impediments and discouragements should be suffered to exist against carrying it universally into practice. No real improvements can possibly take place, where the owner or occupier of the land is obliged to depend on the caprice of others, and where the awkwardness or ill nature of one bad neighbour may defeat the best intentions of a whole parish. As a case in point, I know in a neighbouring county, and the same may possibly have happened in this, a deserving young farmer, who, with the consent of the other parishioners in general, planted saintfoin and sowed turnips on a common field bargain; but a purse-proud, overbearing wretch in an adjoining parish, who occupied only a few acres in the other, turned his sheep and cattle in at the usual period, and consumed or destroyed the greatest part of the turnips, and the autumn feed of the saintfoin, for which there was no redress.

* See an excellent REPORT on ENCLOSING by the Board of Agriculture, published since this chapter was written.

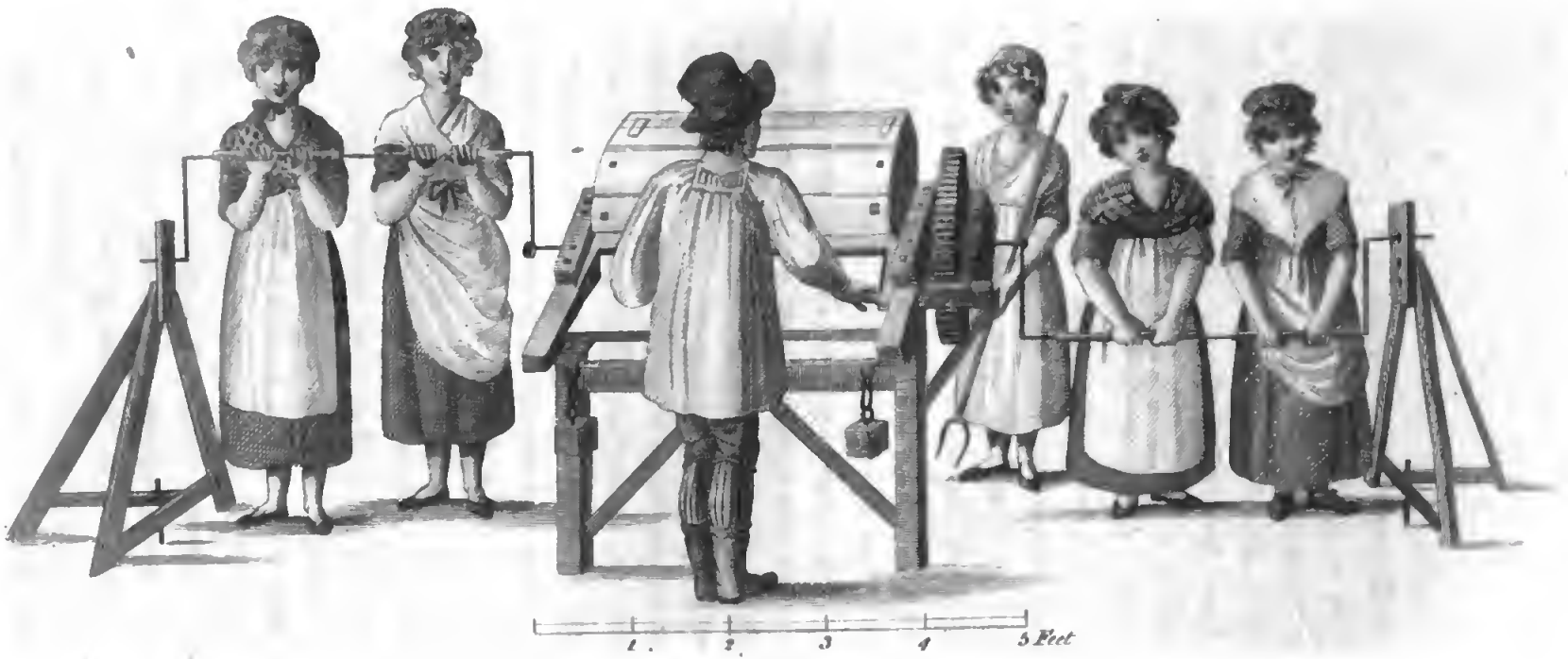
In

In this county, the inconveniences and disadvantages attending commonable lands are sufficiently great, and a few instances will be sufficient to prove the fact.

Along the line of the Kennet, there is much peat land in the common meadows, which cannot be dug out, till they are thrown into severalty; while the price of ashes, and the value of private peat land have risen to an enormous rate, from this very circumstance.

In some remarks on Mr. Pearce's Report, it is observed by Frederick Page, of Newbury, Esq. that "the parishes of Beenham, Padworth, Ufton, and Sulhampstead, enjoy a right, or at least are in the practice of intercommoning with each other. The track of common field over which this right or usage extends, commences at the forty-ninth milestone on the Bath and London road, and extends to the forty-sixth milestone, an extent of three miles, and an average breadth of one mile, and containing nearly 2000 acres of land. Of this common field, part is arable and part pasture, the pasture land lying principally south of the river Kennet, and the arable land on the north side. Each is several from Candlemas to Old Michaelmas; the course on the arable land being, in general, 1st wheat, 2d barley or oats, with or without grass, 3d clover, peas, beans, or fallow. From this course turnips are excluded, unless by agreement between the various occupiers, and this is difficult to be obtained, consequently a turnip crop is considered as an epoch in the history of the common field. This common field land is entirely in the valley, and is a light gravelly soil, which of all others is most unfit to be confined to any regular course of cropping, but ought to be left to the discretion of the occupiers, according to circumstances,

Hand Threshers at Work.



stances, not to insist on the usual objections to common fields.*

"Besides, there is a peculiar inconvenience sustained by the occupiers of common meadow land in this district, which nothing but severalty of the property can effectually remedy. Winter floods are supposed to be beneficial, because they deposit a slime or sediment, which greatly contributes to the fertilization of the land; but these meadows are also subject to floods, owing to sudden rains in the summer; and the consequence has frequently been, that the whole crop of hay on them has been rendered unfit for any thing but the dunghill. For a very comparatively trifling expence, this evil might be avoided by embankment, the money necessary for effecting which might be raised by a rate, according to the practice of the drained land in the fenny counties." This gentleman continues to observe, that on the expediency of enclosing, or at least of allotting, common field lands, there can be no doubt; and he thinks that the dread the occupiers lie under of avoiding their leases, is a principal objection, otherwise they would gladly contribute, according to their respective interests, to the expence of enclosure. The disadvantage respecting peat, which is mentioned be-

* "What system of barbarism can be greater than that of obliging every farmer of a parish possessing soils, perhaps totally different, all to cultivate in the same rotation! What a gross absurdity to bind down in the fetters of custom ten intelligent men, willing to adopt the improvements adapted to enclosures, because one stupid fellow is obstinate for the practice of his grandfather! To give ignorance the power to limit knowledge, to render stupidity the measure of talents, to chain down industry to the non-exertions of indolence, and fix an insuperable bar, a perpetual exclusion, to all that energy of improvement which has carried husbandry to perfection by means of enclosure! Yet all this is done by the common field system.—*Report on Enclosing, p.* 219.

fore

fore this extract, strengthens the arguments for throwing the meadows in this district into severalty.

My friend Theodore Price, Esq. the proprietor of an estate in the parish of Binfield, furnishes me with the last instance I shall adduce of the evils attending common fields, though they might be multiplied without end. "In the parish of Binfield," says he, "there is a common field of about 200 acres; some of the proprietors hold ten or twelve acres in different parts. Were this property inclosed, and thrown together, it would be worth fifty per cent. more to let, besides the advantages accruing to the tenant. For here an absurd custom prevails of turning in cattle, as soon as all the occupiers but *one* have carried off their crops; so that the *last* person, from whatever cause it may arise, is exposed to the danger of having his corn eaten up, which must be very irritating, and productive of bad neighbourhood."*

These are facts that speak for themselves; yet the discouragements to enclosures are numerous; not only the difficulties of adjusting preliminaries are considerable, but the subsequent expences are enormous. Had not the public good been sacrificed to private emolument, long before this period a general enclosure act would have been obtained, by the talents and exertions of the

* I record with pleasure the subsequent arrangement, which, with little trouble or expence, has produced many good effects. By a particular agreement, made in 1784, and since acquiesced in, the land in the unenclosed parish of Cumner was thrown into quarters, to the great benefit of all parties concerned. The act of the 13th of his present Majesty prescribes the mode, and offers facilities for accomplishing this material improvement; but it is to be regretted that this legislative provision is so seldom called into use, from the difficulty in reconciling so many jarring interests.

present

present President* of the Board of Agriculture, simple in its plan, and efficacious, and economical in its operation. If the fees of the clerks of the House of Commons are considered as a sacred property which must not be touched, let a fair and full value be put on them, to be paid by the public: but let not those who wish to enclose or allot a few hundred acres, in passing a bill through the House, be subjected to nearly the same expence as if the object were several thousands. Every bill of enclosure likewise ought to be a public bill, and admitted in evidence, without putting persons to the enormous charge of forty, fifty, or sixty guineas, for an attested *written* copy. The general acts of parliament which are *printed* by legal authority, are certainly sufficiently binding on the subject, when it is required to put them in force, and why should there be exceptions, merely to increase the perquisites of office? In courts of law, I have more than once seen the parties obliged to produce a written copy of a bill of enclosure; and in one instance, I am well assured that the solicitor in a suit of this kind, being pressed for time, and finding the clerks otherwise engaged, was glad to copy the act himself, and only received the usual attestation, for which they were paid as if they had done the whole business. Even admitting the distinction between public and private bills, might not the subject be relieved, and the revenue increased, by affixing a stamp of five guineas to every private printed act, in order to give it the validity required? I throw out these hints to country gentlemen, members of parliament, whose interest and whose duty imperiously

* Sir John Sinclair, Baronet, the patron of every rational improvement.

call

call upon them to bring forward some regulations in this respect.

But it is not only in obtaining an act of parliament that the proprietors of land have to lament a wanton waste of money. The grand system of fleecing only commences with the circuitous and protracted manœuvres of solicitors and commissioners, who are to put it in force. Summonses are sent to every individual proprietor by the attorney, on the most trifling occasions, in order to swell his bill; and meeting is held on meeting by the commissioners, that they may come in for their full share of the spoil. When an act of parliament is passed, it must be a matter of notoriety to the proprietors of land, and an advertisement in the provincial papers ought to be the only further notice to parties interested in subsequent arrangements.

At length the award is made out and signed; but this instrument, so far from defining every thing with a precision that will allow no scope for future litigation, has been known to contain *accidental* or *intentional* omissions, which furnish the lawyer with a future job, and involve the proprietors in new expences.

But supposing every thing adjusted as it ought to be, which I will hope is frequently the case, it is always expressly ordered that a copy of the award shall be deposited in the parish chest; and as a further security, that another copy shall be lodged with the clerk of the peace, or in one of the courts at Westminster. This wise provision, however, of rendering what concerns all easily accessible to all, at a trifling expence, is not unusually defeated by the interested policy of the solicitor, who perhaps keeps the only copy of the award in his own possession, as long as the proprietors will submit to it; and charges for information and extracts, according

according to his own fancy. I speak of practices that have fallen under my personal notice elsewhere; and though I am certain there are many liberal minded and honourable men in Berkshire more especially, in the profession of the law, who would despise such artifices, and who are infinitely above the meanness to which I allude, nothing, in my opinion, ought to be left to the honesty or the discretion of the individual, but every step and process should be strictly observed in the terms of the act.

In order to ascertain how many parishes had lately been enclosed in this county, it occurred to me to apply to Mr. Budd, the worthy and obliging clerk of the peace, for an account of the number of awards lodged in his office, which surely is the most proper place. The following is a list of all the awards said to be found there, recent or otherwise.

Faringdon	Earley
Speen	Denchworth
Upton	Waltham St. Lawrence
Hampstead Norris	East Challow
Lyford	Tilehurst
Stratfield Mortimer	Ealing
Letcombe Regis	Remenham
Bray	Sparsholt and Westcote
Elcot	West Challow
Hinton	And Ufton

Another discouragement to enclosing is the great expence of posts, rails,* and quicks, which are frequently

* Mr. Loveden has lately adopted a cheap but efficacious mode of securing quicksets. Behind them he makes a diamond hedge of willow and osier sets, intersecting each other. In most situations the different kinds of willows planted in this way, might be made to supersede posts

ordered by express clauses in the act of parliament. For grass land and homestalls this is unquestionably necessary; but where enclosures have lately taken place in different parishes of this county, the land has only been allotted, and it has wisely been left to the option of the proprietors to enclose or not, according to their particular views. On land devoted to tillage, fencing is an expence that probably may be saved, at least in the first instance; and I have found indeed that many sensible men are averse to the practice on other grounds. "It is the decided opinion in this county," says Mr. Bushnell, of Aston Tirrold, near Wallingford, "that there should be no fencing with live hedges on the arable lands. The reason assigned is, that they take up space, harbour birds and insects, and very much shade the corn. I think the green land requires fencing."

The admirers of rural beauty and of the picturesque, will lament that any prejudices should exist against quicksets and hedgerows; but experience has shewn that they are not unattended with disadvantages, beyond what Mr. Bushnell states,—in promoting blight, rust, or mildew, from an obstructed circulation of air, and that the expence of a dead fence * against roads,

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posts and rails, which are not only extremely expensive, but liable to be stolen by the poor, long before the hedge has acquired a sufficient height and strength. In fact, the diamond fence of willows would frequently be the only one absolutely required. It is now commonly in use round osier beds, &c. on the line of the Kennet. For this purpose, the bitter goldstone willow is best adapted, as from the nauseousness of its taste no animals will crop it; and it is likewise peculiarly disagreeable to that destructive vermin, the water rat.

* A substantial dead hedge may be made of thorns placed in the ground, and supported by rails of willow poles and short stakes on one side

which certainly is requisite in arable fields, is more than counterbalanced by the quantity and quality of the crops under this system of management. It should be observed, however, that where hedges are principally objected to, it is in districts where the land is chiefly in tillage, or on uplands, where they would be reared with difficulty. Berkshire, indeed, presents in many places a rich and sylvan aspect, and in no part is disfigured by rude and naked stone walls, which give an uncommon degree of sterility to the scene, as is witnessed in various tracks in Oxfordshire and Gloucestershire.

Notwithstanding the impediments and discouragements under which enclosing labours, and which I have stated with no invidious aim, but solely prompted by a sense of duty, I have the pleasure to observe, that they are not sufficient to damp the spirit of this county; and that acts are annually procured to divide and enclose commons and wastes. The following is a list of the parishes as they stand at present. It has cost me much trouble to form it, but after all I fear inaccuracies will be found. A parish sometimes contains enclosed hamlets, when the whole is not; and sometimes the parish under its proper appellation is enclosed, when it has hamlets or tithings remaining in common field. In this respect, information must sometimes be vague; nor can a provincial report be expected to be as complete and perfect, as if it were restricted to a single parish. In extenuation of apparent oversights, it should further be remarked, that there is scarcely a

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side, or both, according to situation. Provided dead fences answer the purpose, the more unexpensive the better, as they seldom are allowed to stand more than a few months in the season.

single parish without some old enclosures; and that in several others, which are said, generally, to be enclosed, particular commons are sometimes left as before.

By enclosing also in several parishes of this county is only meant that the land is allotted and thrown into severalty, as has been previously mentioned, and that common fields are usually several for certain periods of the year, and are generally in pretty large portions, not in single ridges, intermixed, as is frequent in some other counties.

Alphabetical List of Parishes, with their Circumstances, in 1807.

Abingdon { St. Helens, St. Nicholas } part old enclosures, part common field and commons.

Aldermaston, partly enclosed, partly common field and wastes.

Aldworth, enclosed.

Appleton, chiefly common field.

Arborfield, chiefly enclosed, some wastes.

Ardington, common field.

Ashampstead, chiefly enclosed.

Ashbury, enclosed, 1770.

Aston Tirrold, enclosed, 1742.

Avington, enclosed.

Barkham, part enclosed, part common field and wastes.

Basilden, enclosed 1744, part remains common field.

Beedon, chiefly enclosed.

Beenham, chiefly common field and commonable.

Beselsleigh, enclosed.

Binfield, chiefly enclosed; some common field, &c.

Bisham, enclosed.

Blewbury, enclosed, part very lately.

Boxford,

Boxford, chiefly common field.
Bradfield, enclosed.
Bray, part enclosed, part common field and wastes.
Brightwalton, chiefly enclosed or allotted.
Brightwell, partly enclosed.
Brimpton, part enclosed, part common field.
Buckland, enclosed, 1802.
Bncklebury, part enclosed, common field, and wastes.
Burghfield, part enclosed, much common field.
Buscot, enclosed in the reign of James I.
Catmore, enclosed.
Chaddleworth, chiefly open field.
Chievely, chiefly allotted, or enclosed.
Cholsey, chiefly common field.
Clewer, chiefly enclosed.
Childrey, enclosed, 1772.
Chilton, common field.
Coleshill, enclosed about thirty years ago.
Compton, part enclosed.
Compton Beauchamp, enclosed, part in 1794.
Cookham, part enclosed, part common field.
Coxwell, Great and Little, enclosed.
Cumner, chiefly common field. Land thrown into quarters 1784.
Denchworth, enclosed, 1801.
Didcot, chiefly common field.
Drayton, chiefly common field.
Eaton Hasting, enclosed, James I.
Enbourne, enclosed, except a large common.
Englefield, enclosed.
Faringdon, enclosed, 1771.
Farnborough, enclosed, 1777.
Fawley, allotted, or enclosed.
Finchampstead, chiefly enclosed, considerable wastes.

Frilsham, partly enclosed.

Fyfield, chiefly common field.

East Garston, enclosed, 1771.

East Hagbourn, chiefly common field.

East Hampstead, partly enclosed, common field and heath land.

Hampstead Marshall, old enclosures.

Hampstead Norris, enclosed, 1771.

Hanney, enclosed, 1803, &c.

Harwell, enclosed, 1802.

Hatford, enclosed, 1577.

East Hendred, partly enclosed in 1801, rest common field.

West Hendred, chiefly common field. Hamlet of East Ginge, allotted.

North Hinksey, enclosed, 1776.

South Hinksey, chiefly open field.

Hinton, enclosed, 1760.

Hungerford, partly enclosed, partly common field.

Hurley, old enclosures, or in severalty, some wastes.

Hurst, enclosed, 1807, &c.

East Ilsley, common field chiefly.

West Ilsley, chiefly enclosed.

Inkpen, enclosed, 1747, two commons.

Kintbury, part enclosed, 1779, rest common field.

Kingston Bagpuze, common field.

Lambourne, enclosed or allotted, 1776, 1778, 1803.

Langford, partly enclosed, 1788.

Letcombe Basset, enclosed, 1772.

Letcombe Regis, enclosed, 1801. Chapelry of Challow, 1802.

East Lockinge, common field, chiefly.

Longworth, chiefly enclosed, Charney Chapelry lately.

Marcham,

Marcham, chiefly common field.

Milton, old enclosures and common field.

North Moreton, partly enclosed.

South Moreton, partly enclosed.

Newbury, partly enclosed, partly common field and wastes.

Oakingham, about half enclosed, the rest common field and wastes.

Padworth, chiefly enclosed.

Pangbourn, enclosed.

Peasemore, chiefly open field.

Purley, partly enclosed, partly common field.

Pusey, enclosed 1753.

Radley, enclosed about forty years ago.

Reading, St. Mary's, St. Giles's, St. Lawrence, } enclosed.

Remenham, enclosed, 1799.

Ruscombe, enclosed, or in severalty, some commons.

Sandhurst, chiefly common field and wastes.

Shalbourn, enclosed, 1800.

Shaw, partly enclosed, partly common field.

Great Shefford, about two-thirds enclosed, rest common field.

Little Shefford, enclosed.

Shellingford, old enclosures.

Shilton, enclosed, 1794.

Shinfield, chiefly enclosed, some wastes.

Shottesbrooke, enclosed, 1806.

Shrivenham, enclosed, 1789, 1796, &c.

Sparsholt, enclosed, 1777, 1800.

Speen, enclosed, 1737, 1779.

Stanford, enclosed, 1783.

Stanford Dingley, chiefly enclosed.

Steventon, chiefly common field.

Stratfield,

Stratfield Mortimer, enclosed, or allotted, 1802.

Streatley, chiefly common field.

Sulham, enclosed chiefly.

Sulhampstead Abbots and Bannister, chiefly enclosed, considerable commons.

Sunning, chiefly enclosed, part in 1742.

Sunninghill, partly enclosed, partly common field and wastes.

Sunningwell, enclosed, part in 1802.

Sutton Courtney, part enclosed in 1801, part common field.

Swallowfield, chiefly enclosed, some wastes.

Thatcham, part enclosed, part common field, about 600 acres wastes.

Tidmarsh, enclosed.

Tylehurst, chiefly enclosed, some common field, and a very large common meadow at Theale.

Uffington, enclosed, 1777.

Ufton, enclosed, 1804.

Wallingford, St. Leonard's, St. Mary's, St. Peter's } land in severalty by agreement.

Lawrence Waltham, chiefly enclosed.

White Waltham, enclosed, 1803.

Wantage, enclosed, 1803.

Warfield, partly enclosed, partly common field.

Wargrave, chiefly enclosed, some wastes.

Wasing, chiefly enclosed.

Welford, partly enclosed, partly common field.

New Windsor, enclosed.

Old Windsor, chiefly common field.

Winkfield, chiefly enclosed, considerable wastes.

Witham, partly enclosed, partly open field.

Little Wittenham, common field, chiefly.

Long Wittenham, common field, chiefly.

West

West Woodhay, chiefly enclosed.

Woolhampton, part enclosed, part common field.

Wootton, enclosed within twelve or fourteen years.

Yattendon, chiefly enclosed.

On inclosures, it is frequently found that too little regard has been paid to the real or customary rights of the poor, though there are some splendid exceptions.* It is impossible indeed to allot a fraction of land to each individual of that description, particularly such as have no original freehold or copyhold property; but where the privilege has been usual of cutting furze, heath, or turf, or of turning out cattle or geese, it is only reasonable that an adequate compensation should be made in gross, which should be let to the best advantage, and laid out by the parish officers in the purchase of fuel, to be apportioned to each family according to its circumstances. This would not only be just but politic; for as the poor must be maintained, whatever they derive from this source is not merely a comfort to them, but also an alleviation of the rates.

In alloting commons or wastes, regard should likewise be paid, not only to the real, but to the relative value. Farms at a distance cannot possibly be benefited by them in an equal proportion with such as are near; and therefore it appears reasonable to pay some regard to situation, and other circumstances.

2. The size of inclosed fields is various, according to situation. Mr. Brown, of Idstone, in the parish of Ashbury, has fields of about eighty acres each, which facilitate a regular rotation of crops, and an uniform sys-

* In the parish of Stratfield Mortimer, lately enclosed, one hundred acres were allotted to the poor, in lieu of their rights of cutting heath and turf.

tem

tem of husbandry; but this is on that part of his farm which is upland. The fields on the downs, or chalk district, are indeed generally large, and I heard of some that measured one hundred acres; but the generality in the more fertile districts, and particularly in the vicinity of towns, are of a moderate size, and some very small.

The inclosed parts are commonly fenced with white thorn (*cratægus oxyacantha*), but too frequently a mixture of crabs, and various other indigenous trees and shrubs, are seen in its ridge, or forming brakes by its side, which either occasion a waste of land, or have a tendency to make gaps. The mode of managing hedges by cutting and plashing, differs in nothing that I could perceive from the common practice. It is a prevailing error, in the opinion of some good farmers, to allow hedges to grow high before they are cut; by which little can be gained beyond the expence of labour, and much is lost by shading the corn. A hedge carefully managed when it is young, and frequently cropt to thicken it, should in few situations be allowed to rise above four or five feet; and if it were kept at this height, by annual prunings, and carefully scouring the ditches, it would not only be more ornamental, but a considerable saving and improvement. The hedge rows are generally elms, stript or shredded up, with ash pollards, and in some places oaks.

The white thorn will certainly thrive on pretty high and exposed situations, on the confines of the White Horse Hills. At Letcombe Basset, Mr. Smith shewed me some thriving hedges of this kind; but his example in planting them did not seem to be much followed. On the downs, hazel appears to be most natural to the soil, and it is sometimes used there as a fence; but the greatest

greatest part of this track is without divisions, and the same is the case at the eastern extremity of the Vale, for the reasons already assigned.

3. In the neighbourhood of gentlemen's seats, the Norfolk plan of gates is commonly used; but so various are the tastes and fancies of men, that even in this respect great diversity in the form is to be seen.

As gates, however, are now become very expensive, it is incumbent on the managers of estates to construct them on farms, with as much regard to economy as can be made consistent with utility. Oak posts, from their superior durability, are undoubtedly the best, and ultimately the cheapest of any; but the gate itself might often be advantageously made of split willow, or ash poles, which, being light, would be more likely to hang true, and to keep in order, than if it were made of heavier and more expensive materials.

In almost all wooden out-door works, I observed a culpable neglect in weather painting them, which not only would add to the neatness of their appearance, but render them much more lasting. As the public is now supplied with a kind of paint adapted for this purpose, at once cheap and durable, it is to be hoped that an omission commonly remarked will speedily be supplied.

CHAPTER VII.

ARABLE LANDS.

SECTION I.—TILLAGE.

No chapter in an Agricultural Report is generally reckoned more important than this; and yet none is so liable to embarrass both the writer and the reader. To enter into minute details of practices which have been sanctioned only by prejudice, or adopted from caprice, can be little gratifying to the scientific agriculturist, who makes sound judgment and a knowledge of nature his guides, nor can it be instructive to the public, except by way of contrast and comparison. The prevailing system of cultivation in any county is no criterion of its being best adapted to circumstances; nor is it rashly to be condemned by those who till another kind of soil, and therefore are incompetent judges of what is to be recommended or rejected.

Perhaps few counties have more marked and better discriminated features of soil than Berks, or contain a greater proportion of intelligent cultivators; yet the practices that would obviously be proper in one district are not unfrequently pursued in another of a totally different nature, and *vice versa;* while those who have emancipated themselves from established habits and follow a more rational system, frequently, from the remaining

maining prejudices of their servants and labourers, find slow returns for their toils and expences, and therefore are proportionably long in gaining imitators.

"To obtain the greatest profit at the least cost," is the basis on which all experiments connected with rural economy should be reared. Where this principle is violated, both the community and the individual are injured: the former must pay more for what is produced, and the latter be satisfied with an inadequate profit.

But though errors of this kind are neither rare nor confined to any particular part of the kingdom, after making every abatement which truth and justice require, it must be allowed that this county has made great and rapid advances in agricultural improvement, under the influence of sound judgment, and a due regard to soil and situation; and if the following collection of facts and observations should pave the way to further improvements, by affording an opportunity of selecting the most judicious modes of practice, and consequently of lessening expence and increasing produce, the reporter shall feel himself abundantly recompensed for the multiplicity of his enquiries to promote this desirable end.

According to the distribution in Chapter I, it has been calculated that Berkshire contains about 255,000 acres of arable land; and of late years, from the price that grain has fetched at market, the quantity in aration has rather been increased than diminished, though in some situations the policy of this is extremely doubtful, particularly in breaking up so much of the down lands, as will be noticed in another place. "We plow and sow too much" was the pointed remark of a sensible farmer of Warfield: "Did we manure and manage

manage our land better, we should have more produce from two thirds of the arable land than we now have from the whole." The truth of this observation has been confirmed to me by many others. It is stock that makes manure; and the more land in corn, the less stock can be kept. If *two* acres, however, can by good management be made to produce the same quantity of grain as *three* under a worse system, the inference is obvious, and the advantage is apparent of regarding quality rather than quantity.

The common Berkshire two wheel plough, and the strength either requisite or allowed, to draw it, have already been mentioned under agricultural implements. It is certainly less used than formerly, though still more generally employed than its merits seem to demand. That its comparative weight with other ploughs on a more improved construction, will require at least one horse more to draw it, will be allowed by those who are most partial to its use; and if it does not perform its work proportionably better, the preference it receives is certainly a very serious loss to the cultivator, as every labouring horse that can be properly spared, is unquestionably so much gained *.

Not only in the Vale of White Horse, however, where a strong and frequently a wet tenacious soil require strength in the implements and draught, but also on light soils, where a less portion of either is necessary, this plough continues to be a favourite with farmers of the old school. Even in the same parish, however, one farmer sometimes uses it with two horses on a light

* Might not the Kentish turn-wrest plough be introduced with advantage in many parts of this county, particularly on the strong cohesive soils?

soil,

soil, while his neighbour, under exactly the same circumstances, will employ four. In defence of such a number of horses, it has been contended that fewer would induce persons to plow shallow, which already is too much the case on stiff soils, or it would injure the horses beyond the expence of keeping additional strength. Both arguments are certainly worthy of attention; but it is experience, not speculation or prejudice, that should decide the question. The expence of plowing is allowed to be enormous in some parts of this county, and ought to be reduced by every practicable means, consistent with good tillage*.

The two furrow plough, the Hurley single wheel plough, the Rotheram and the chain plough are all adapted to different soils and situations, and one or other, except the last, is used by improving farmers with good effects, and gradually gaining ground among their neighbours, as the advantages attending their introduction are perceived. As for the chain plough, which seems excellently adapted for the stony or flinty soils of this county, it is scarcely, if at all tried, which

* It was recommended by Mr. Pearce to alter the hours of working the plough. "A horse," says he, "working in summer from five to eleven, and resting during the heat of the day, then going to work from three till seven, will be less fatigued in performing ten hours work, than another which has been constantly drawing eight or nine hours. In most of the eastern counties, the ploughs work in this manner two journeys a day, and find their account in it." To this plan some justly object, when the land lies at any considerable distance from the homestall, and others, because the servants would be unwilling to be put out of their old course. The last cause, indeed, is the bane of all improvement: and he who introduces new implements or new modes of management, must of necessity have new agents, that is, servants from those parts of the kingdom where the practices have been naturalized, if he wishes for complete success.

surely

surely it might be with a fair prospect of success. On his Majesty's Norfolk farm, the implements of that county are generally used; and the Norfolk plough has been warmly recommended as very proper for the light soils of Berkshire, as the Suffolk iron plough has for the stiff and heavy soils; but they have not hitherto been adopted.

In the Vale, and other deep and clayey soils, a second and even a third tilth for wheat are thought necessary, and the last is sometimes the deepest. But if the skim or scarifier were to be first passed over the land in order to destroy the weeds, perhaps one plowing might be saved. Much, however, will depend on the state of the land as to wetness or dryness, and its previous circumstances. It is the opinion of that able judge, Mr. Loveden, that land is frequently plowed too much for wheat. On some of his strong adhesive soils, after a first plowing, which is always performed in favourable weather, if the second should take place when the land is wet, it cakes together, and prevents its pulverization by the harrows, and consequently the seed is not buried deep enough. In that case, he finds a third plowing to a less depth necessary, even if it should not have otherwise been required.*

Supposing the land to be kept clear from weeds, it is plowing well and at proper seasons, rather than its frequency, that meliorates and fructifies the soil. Land naturally wet and tenacious, in a rainy season, by the

* The same gentleman thinks that spade tillage in the garden manner, would in some situations be more beneficial and nearly as cheap as plowing. There are indeed portions of land where ploughs cannot be used. It is only, however, on small farms, or by gentlemen of fortune that the garden mode of cultivation is likely to be attended to.

trampling

trampling of the horses is converted into a kind of mortar, and plowing had better have been omitted; and when too dry, never separates properly, independent of the additional strength required to work it. For every operation of husbandry Providence has granted corresponding weather; and it is always wisest and safest to wait for it, and to seize a favourable opportunity to follow, not to force, the established order of nature.

In the chalk and gravelly districts, where the soil is already too light, once plowing is generally thought sufficient for most kinds of grain. In such situations, indeed, it is found profitable to make the ground as hard as possible before sowing, either by rolling it or treading it with sheep, and then only moving it with a nine share plough and harrowing in the corn.

On clover leys, once plowing of course is sufficient on all soils for every purpose; and it has been recommended as a beneficial practice to plow in autumn on wet soils for spring corn, whenever circumstances will permit.

Before dismissing this subject, it should be noticed, that *odd* plowings have been contended for, and apparently on rational grounds. By *odd* plowings are meant *once*, or *thrice*, else the same surface that produced the last crop will again be applied in its exhausted state to a new vegetation: for it is obvious, that *two* or *four* tilths will nearly leave the surface as it was at first.

In the deeper soils of the Vale, the ridges are generally thrown pretty high as a substitute for draining; but few unsightly baulks are left,* nor is more land wasted

* In some old title deeds belonging to Mr. Loveden, pieces of land, which he suspects were formerly baulks, are mentioned under the appellation

than can be helped under this form of aration. In the drier soils the arable land is made as level as possible, and has generally a very neat appearance.

SECTION II.—FALLOWING.

It was the observation of the most distinguished personage in this kingdom, and which deserves to be written in letters of gold, "THAT THE GROUND, LIKE MAN, WAS NEVER INTENDED TO BE IDLE; IF IT DOES NOT PRODUCE SOMETHING USEFUL, IT WILL BE OVERRUN WITH WEEDS."

In the enclosed parts of this county, fallowing indeed is generally superseded by the introduction of meliorating crops, which yield a present profit, and are equally serviceable to the land. Yet the practice of fallowing is still pretty prevalent on the strong, wet, unenclosed lands, and sometimes likewise on the enclosed; and is justified by arguments of apparent weight, as well as by the experience of men who have an enlightened and liberal way of thinking. In a letter with which I have been favoured by Mr. Bushnell, of Aston, near Wallingford, he says, "I beg leave to make a few observations on the practice of fallowing land in this neighbourhood. Though the soil is rich, yet the substratum is cold, or rather tenacious; and in order to make it productive, I think it absolutely necessary it should have a fallow once in four years, to be shewn the sun, which enriches it wonderfully. The mode I pursue in the parish of Blewbury, much the same soil as this, is first barley after the fallow, then beans,

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pellation of *petty doles*. By a perversion of language, the common people call them *petty-toes*.

by

by carrying all the manure I can raise for the beans, after beans wheat upon one plowing, and plow thin. In my wheat in the month of March or April, I harrow in upon three fourths of it grass seeds, the remaining quarter I sow with vetches, and this enables me to keep a stock of sheep. The grass I begin feeding off as soon as fit with my ewes and lambs, and then plow fallows immediately; so that my grass is fed off and the land fallowed by the end of June, at which time the vetches come in. They are fed the same as the plow fallows with the sheep, after which the meadows take the stock. I hope you will excuse this digression, as it can only be adopted on an enclosed farm."

On another occasion, the same well informed agriculturist remarks: "There is no doubt that many great improvements have been made in the management of light land by sowing turnips and clover, and after the clover it is very kind for wheat; but the strong clay land, I apprehend, was managed as well forty or fifty years ago as it is now.* I am of opinion that the introduction of vetches for sheep, which makes the land favourable for wheat afterwards, has been of essential service to the farmer."

It is evident from what has been produced, that Mr. Bushnell is partial to fallowing, nor is he singular in this respect; but though he does not think that improvements on this kind of soils have been so great or so gene-

* On consulting that original agricultural writer Ellis, of Great Gaddesden, who published an octavo volume, now scarce, in 1745, under the title of the "Chiltern and Vale farming explained," I find little alteration made at this time in the Vale of White Horse, where unenclosed, from what he recommends.

ral as on the light, he does not deny that they are susceptible of more than they have hitherto received. On them, however, fallowing is still considered as indispensable by many, especially where the lands are unenclosed; but this opinion begins gradually to be shaken, and will probably be exploded under the new system of management.

"Strong land," says a farmer of the forest district, "should always be fallowed for wheat, and light land for turnips; afterwards the light land is very kind for barley or grass."

"The strong soil," observes another gentleman, "must be fallowed for wheat, barley, and turnips: the less the light is plowed, provided it is kept clean and full of manure, the better; plowing makes it still lighter, which is its natural defect."

Strong clays, it has likewise been observed, are not easily meliorated by green crops. The feeding them off is found to poach the land, or to temper it to the consistence of mortar, and to render it fitter for making bricks than for growing of corn. When reduced to this state by green crops and poaching, clean fallowing, it is said, is the best means of restoring it. This, however, can happen only on very wet soils; and with proper draining, and seizing the proper season, every difficulty would be removed, and every objection obviated.*

* It is remarked by some, that various experiments have been tried to cultivate this kind of land without a fallow, but in general without success. The best method, say they, is to sow clover or trefoil in the spring on part of the wheat, and to sow the remainder with vetches. After the wheat is carried, feed the grass with sheep, and then get the ground fallowed by the end of May; plow up the ground sown with vetches as fast as the sheep eat them off, and afterwards give the land as

That fallowing is not absolutely necessary, may be inferred from the prevailing practice to the contrary on enclosed farms, and the general desire that is shewn in common field bargains, when the parishioners can agree, to plant vetches, peas, clover, and sometimes turnips on lands, which by the old custom ought to lie fallow, but which, by a modern improvement, is *hitched*, or severalled for that turn, for the purpose of cropping. In order, however, to do away the necessity of fallowing, it is admitted on all hands, that the land should be kept free from weeds, and in good heart, as well as properly drained; or the alternative is indisputable, especially where turnips cannot be sown.

But whatever mode may be pursued, it is not always the cultivator that is to be blamed for his adherence to the old practice of fallowing, where it might be dispensed with: the landowner is equally pertinacious in laying down this exploded system as a condition which it is penal to deviate from. While absurd clauses and restraints are introduced into leases, or verbal agreements, the career of improvement must inevitably be checked.

SECTION III.—ROTATION OF CROPS.

On a judicious system of cropping, in a great measure, depends the success of the farmer. He may till

as many plowings as the weather and time will permit; sow it with barley the ensuing spring, after the barley with beans, hoed three times; and after the beans with wheat on one plowing. Manure with the fold for barley, and with the cart for beans. Others, however, wholly disapprove of this practice. Vetches, say they, cannot be planted to any advantage without plowing. Who can decide, when doctors disagree?

and manure with skill and spirit, but if he exhausts his land by cross cropping, or by a succession of the same kind of crops, he must eventually injure himself as well as the proprietor of the soil. A regular rotation, however, is not always in the power of man. Unfavourable seasons, the state of the farm on entering, and other contingencies sufficiently obvious, will sometimes defeat his best endeavours; and, without any fault of his own, oblige him to have recourse to some means of rendering his land productive for the time, contrary to his better judgment, and even his ultimate interest.

To bind up a tenant, therefore, to one uniform course, from which no occasional deviation is to be made under any circumstances, is imposing a burden and restraint on him, which is totally irreconcileable to any principles of justice or of policy. Some general rules, indeed, may be laid down with unerring certainty, such as never to take two crops of the same grain in succession,* or commonly two white crops, without a green or neutral crop to intervene; but the length of the

* Jethro Tull, however, was of opinion, that land adapted for any particular species of grain might always be sown with the same grain, provided there was a sufficient time for the tillage of it. But this is not the case with wheat, which is generally sown in October, and not reaped till August. It has, therefore, been suggested, that sowing wheat and beans alternately, on many sorts of land, would be the most profitable mode of husbandry. The change of crops from corn to grass or turnips, is because the latter draw their nourishment chiefly by the tap root, and do not exhaust that part of the land which most kinds of corn does. An exhausted surface may be more speedily restored to fertility than when the staple is tired and beyond the reach of the plough; and hence clover is improper to be too often repeated on the same land: once in eight years is thought sufficient; and saintfoin, which strikes still deeper and lasts longer, will never thrive so well a second time in the same spot, within the space of a moderate life.

period

period at which crops of the same kind are to return, can only be determined by a perfect knowledge of soil, management and situation, which cannot all be previously ascertained.

From the variety of soils of which Berkshire consists, a different course of crops, as well as a different mode of tillage, must of necessity be introduced; and on this important point I have studied to inform myself as minutely as possible. Without, however, presuming to censure or applaud every particular practice, I shall lay the rotation of crops at present usually adopted by the best agriculturists before my readers; and in order that others may judge of the propriety or impropriety of the system pursued, shall briefly notice the distinction of soils in the spots brought under review. The number of observations might easily have been increased; but in neighbouring parishes there is sometimes little difference in the mode of conducting the operations of husbandry, and repetitions would only swell the volume, without any practical benefit to the public.

VALE OF WHITE HORSE.

Ashbury. Soil below the hills, sand, loam, and stiff clay. A seven field system. 1. Wheat, with four or five plowings; 2. Peas, or beans; 3. Wheat, with three plowings and manure; 4. Beans; 5. Oats, or barley, with seeds; 6. Fallow, followed by wheat. This is the practice of Mr. T. Brown, of Idstone, a very intelligent and extensive cultivator, who has likewise a considerable portion of uphill or chalky land, on which he pursues a four field system. See Chalky District.

Faringdon.

Faringdon. Soil strong clay, sand, stone brash, or lime-stone. 1. Wheat; 2. Beans; 3. Barley, and a fallow, or turnips and clover. On the stronger lands it is usual to take wheat after beans, tares or clover, and barley on fallows.

Buckland. Soil stone brash, sandy, and stiff clay. 1. Wheat on fallows; 2. Barley or oats; 3. Peas, but thought wrong; 4. Summer fallow for turnips; 5. Barley, with seeds. The following plan, however, is most approved by Sir John Throckmorton: 1. Wheat on clover leys; 2. Barley or oats; 3. Turnips; 4. Barley, with seeds; 5. Clover; 6. Wheat again. Always dung for turnips, and frequently for wheat.

Kingston Bagpuze. A light sandy soil. Wheat on grass leys; peas or beans; barley; part of the field always in turnips or sown grass; the fallow preceding the wheat always produces a green crop of some kind. Being unenclosed, the field is thrown into four quarters.

Stanford. Soil stone brash, sandy loam, and stiff clay. Rotation of crops: wheat; beans and peas; turnips; barley, with seeds.

Uffington Soil sandy loam, and strong clay. On the strong land chiefly a fallow, and then wheat; beans; wheat again; and then barley, with seeds. Few turnips are cultivated here. On the light soil the following rotation is used: wheat after fallowing; barley or oats; turnips with manure; then oats, and sometimes barley, with seeds, which lie two years, and are broke up for wheat.

Sparsholt. Soil below the hills stiff loam, and calcareous loam. A four field system. 1. Wheat on clover leys or bean stubbs; 2. Beans or peas; 3. Barley, with seeds; 4. Seeds, half perhaps vetches fed off, or fallows, as preparative for wheat again.

Childrey.

Childrey. Nearly the same soil and rotation of crops as in Sparsholt.

Letcombe Basset. Soil, in the best parts, a cretaceous earth, well adapted for corn. The rotation of crops varies with the soil. On the worst soils, wheat in five or six years; on the best, once in four, as follows: fallow, clover leys for wheat, beans, turnips, &c. barley, with seeds.

Wantage. Soil strong loam, clay, &c. Uphill land. 1. Wheat on fallows, manured with yard dung and sheep; 2. Barley; 3. Oats, sometimes seeds with the barley or oats; 4. Seeds or fallow. Turnips, since the late inclosure, are gaining ground. Downhill land: Wheat; beans; barley; beans or peas; wheat again; a white crop, and a green or neutral* crop of some kind, alternately.

East Hendred. Soil a white loam, some strong tenacious clay. 1. Wheat; 2. Beans or peas; 3. Barley or oats, with grass seeds; 4. Seeds, vetches, and fallow; 5. Wheat; 6. Turnips; 7. Barley or oats; 8. Fallow, peas, vetches, &c. On the uphill parts of the parish, the greatest part of which has been lately allotted, the system is nearly the same. Mr. Allen, of this place, who unites much practical knowledge of agriculture with a communicative disposition, shewed me some wheat which he had sown on the very top of the Cuckamsley hills, a continuation of the White Horse range. It was put into the ground in the first week of August, and on the 8th of October, it was a strong and thick plant; but I suspect the soil was too light for winter corn.

* It has been denied by some that beans is a neutral crop. Many parts of the Vale, however, with good tillage and manuring, would stand wheat and beans alternately, ad infinitum.

Hanney.

Hanney. Strong white gravelly and loamy soil. Common field a four shift system. 1. Wheat on fallows or leys; 2. Beans or peas; 3. Barley and oats, sometimes with seeds, by agreement. Inclosed lands: 1 Wheat on bean stubbles, with seeds in the spring; 2. Green crop; 3. Barley and oats; 4. Beans.

Marcham. Soil light sand, stone brash, and some clay and peat. 1. Barley, with seeds; 2. Green crop; 3. Wheat; 4. Barley, with seeds, &c.; so that wheat is grown once in four years: or, 1. Wheat; 2. Barley, with seeds, and one part fallow for turnips; 3. Peas, or some beans; 4. Barley.

Cumner. Soil stone brash, loamy sand, stiff clay, and some gravel. A five field system prevalent; sometimes four. 1. Fallow sown with turnips; 2. Barley, with clover and other seeds; 3. Clover, mowed or fed; 4. Wheat on the back of the clover; 5. Oats or barley. A hitching on the fallows of three crop land is common.

Wytham. Soil gravel, clay, loam, and stone brash. Wheat; barley; beans; and peas; then wheat again; being generally every year's land.

Abingdon. Soil gravel, loam, and some clay. Some clean fallowing. A four field system. Wheat, vetches, peas, and turnips after, manured for the latter; barley, with or without seeds; oats, with seeds, if none before; plough on the back, and plant wheat again: or, according to the soil, wheat, beans, peas, or turnips; barley, part seeds, part fallow, some vetches; fallow; wheat again.

Sutton Courtney. Soil a strong gravel and rich loam. 1. Beans, manured; 2. Wheat; 3. Barley, with seeds; 4. Beans: or, 1. Beans; 2. Wheat; 3. Turnips; 4. Barley. Francis Justice, Esq., who has much

much manure, from his taking up the tithes of the parish, uses a three shift with advantage on this rich soil.

Milton. Soil clay and gravel. 1. Wheat; 2. Beans; 3. Barley or oats, with seeds; or, a clean fallow on the strong lands.

Hagborne. A fine white loamy soil. Three crops and a fallow. 1. Wheat; 2. Beans; 3. Barley, with seeds; about half fallow; plowed on the back for wheat.

Brightwell. Soil a rich fine loam. Three crops and a fallow. 1. Wheat, after fallowing; 2. Beans; 3. Barley. Broad clover once in eight years.

North and *South Moreton* are nearly under the same system of management. The same may be said of *Cholsey*, except the light gravelly part of the parish, which is often in turnips, saintfoin and artificial grasses.

Wallingford. Soil gravel, sand, and fine loam. A four field system. Wheat, turnips, barley, and beans the principal crops.

Streatley. Soil gravel chiefly; some clay. Rotation of crops: 1. Wheat on clover leys; 2. Oats; 3. Turnips; 4. Barley, with seeds. Vetches in common use.*

THE CHALK DISTRICT.

Several parishes on the confines of the White Horse Hills have a considerable portion of down land belong-

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* In one parish of the Vale, which shall be nameless, but where the soil is unquestionably rich, I was informed, that though there was no regular rotation of crops, it was nothing unusual to have turnips, then two crops of barley, seeds with the last, and sometimes wheat after the first crop of barley. In short, two crops of wheat, or as many of barley in succession, were thought allowable, and consistent with husbandlike management.

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ing to them, of which part is in aration. Beginning again at *Ashbury*, Mr. Brown of Idstone, in that parish, has land of this description, and it will be proper, by way of contrast, to shew the different rotation of his crops on the upland part of his farm, where he adopts a four shift system. 1. Wheat; 2. Part with turnips and vetches, and part barley or oats, with seeds, which lie two years for sheep feed; 3. After turnips and vetches, barley, with seeds, which lie one year, and then the field comes up for wheat together. This gentleman always manures for wheat, using animal dung, rags, and soot. The chalk, as has been already observed, is too much mixed with stones and heterogeneous particles to be made into lime, along the course of what is properly called the White Horse Hills.

Lambourn. Soil chalky on the hills, in the dips a blackish loam, with flints embedded in chalk. A five field system thought preferable for the poorer soils which prevail here. 1. Wheat; 2. Turnips, vetches, &c.; 3. Barley or oats, with seeds; 4, 5. Grass, then wheat again. On the stronger soils: 1. Wheat; 2. Turnips, &c.; 3. Barley or oats, with seeds, and wheat again, on one year's ley.

Sparsholt. This is one of the Vale parishes, with a considerable portion of upland, where a light, chalky, and rubbley soil prevails. On this a six field system is pursued. 1. Wheat; 2. Oats; 3. Turnips; 4. Barley or oats, with grass seeds; 5. Grass, fallowed for wheat. Part of *Childrey*, *Letcombe Basset*, and some other parishes, are similarly circumstanced.

In the parishes of *Chaddleworth*, *Brightwalton*, *Fawley* and *Farnborough*, a four field system is common. The prevailing soil a light loam, with flints on a chalky substratum.

Great

Great and *Little Shefford.* Soil gravel, flint and loam on chalk. A five field course is the usual practice.

Boxford. The soil gravel, chalk, flint, and loam. A four field husbandry. 1. Wheat, manured; 2. Barley, with seeds; 3. Grass; 4. Summer fallow, with turnips, and then wheat again. *Welford*, adjoining, is nearly under the same system. Indeed it is the prevailing mode of agriculture in he Chalk district.

Peasemore. Soil gravel, and flint, with a chalky substratum. A four field system. Wheat frequently planted after turnips. *Chievely*, and some other neighbouring parishes, vary little from what has been already instanced.

West Ilsley. Soil chalky and flinty, some clay. Both four and five shifts are used, the latter chiefly. 1. Wheat on fallows or clover leys; 2. Turnips; 3. Barley; 4. Oats, with clover and rye grass, and then wheat again. Some beans, peas, and vetches, on part of the fallows.

East Ilsley. Soil nearly the same as West Ilsley, and the same mode of husbandry.

Aldworth. Soil heavy, flinty, and chalky land, with some loam. Four field system common in this district; sometimes five, on the poor land. Fallowing not much used; clover, trefoil, Dutch clover, and rye grass, are all in use; wheat stubble generally sown with turnips, peas, or vetches. A variation in the order of crops thought advantageous by Mr. Selwood.

Basildon. Soil loam, chalk, and gravel. 1. Wheat; 2. Beans; 3. Barley; 4. Various: or, 1. Turnips, manured; 2. Barley, with seeds; 3. Grass; 4. Wheat; 5. Oats. Rye and rye grass recommended by Mr. Stone,

Stone, and then turnips. Seldom a clean fallow, but some meliorating crop taken.

Pangbourn. Soil chalk, gravel, and loam. Rotation of crops: 1. Barley, with seeds; 2. Wheat; 3. Oats; 4. Turnips, manured. Plow on the back for wheat.

Wargrave. Soil chiefly a fertile loam. Generally a four field system. Land well managed. Mr. Matthews a distinguished agriculturist.

Remenham. Soil loamy, flinty, part chalky. 1. Wheat and barley; 2. Red clover; 3. Oats, or wheat on clover leys; 4. Fallow, by meliorating crops; after beans always wheat; dung once in four years. Mr. Harbottle,* of Remenham farm, in this parish, who follows a systematic mode of agriculture, according to the Northumberland practice, and who entered about two years ago on his present bargain, which was considerably out of condition, has favoured me with the following table, which may probably be useful to others similarly circumstanced, and inclined to pursue a regular course of husbandry.

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* Perhaps it may appear whimsical to mention, that Mr. Harbottle is probably the tallest man in Berkshire, being 6 feet 4½ inches high. He brought a stock of 200 sheep, of the Leicester breed, with the necessary servants, by sea, from Northumberland to London. His agricultural implements likewise accompanied him: they are all on an improved principle.

Course of Husbandry for Remenham Farm, 1806; and as it will be brought to a regular System of Cultivation.

Four Field System. Quarters.				1806.	1807.	1908.	1809.	1810.
1. Headings	34	3	14	Tares and Turnips	Wheat and barley	Clover, red	Oats or wheat, on clover leys	Fallow, including turnips, beans, peas, tares, &c.
White Several	14	3	39	Clean fallow	Wheat	Clover	Ditto	Ditto
Great Britain's Hill	9	2	28	Ditto	Barley	Perennial rye grass, to remain 1 b. p. acre, 10lbs. white clover, 2 red, 2 hop	Ditto	Ditto
Sixteen Acres	16	3	34	Rape, potatoes, and turnips	Wheat and rye	Clover, red	Wheat	Ditto
Little Britain's Hill	5	1	15	Oats	Fallow	Wheat	Oats	Ditto
	81	3	10					
2. Fourteen Acres	16	2	3	Barley	Clover, red	Oats or wheat	Fallow	Wheat or barley
Rockall's Pightle	10	2	3	Ditto	Ditto	As before	Ditto	Ditto
Linches	4	2	22	Ditto	Ditto	Oats	Ditto	Barley
Ten Acres	9	2	35	Ditto	Ditto	Wheat	Ditto	Wheat or barley
Twenty Acres	21	0	5	Wheat	Tares and peas	Ditto	Ditto	Ditto
Pill Several	13	0	34	Oats	Beans	Ditto	Ditto	Ditto
Old Hill	3	3	28	Ditto	Peas	Barley	Ditto	Ditto
	79	2	10					
3. Park Several	17	2	8	Oats	Turnips	Wheat or barley	Red cloves	Oats or wheat
Park Piece	15	1	34	Ditto	Fallow clean	Wheat	Ditto	Ditto
The Grove	11	1	20	Ditto	Ditto	Barley	Ditto	Oats
Low part of Eden Riggs	15	3	33	Ditto	Turnips	Ditto	Ditto	Ditto
Bushy Ham	13	2	2	Ditto	Ditto	Wheat	Ditto	Ditto (wheat)
	73	3	17					
4. Great and Little Ham	36	0	15	Wheat	Oats	Clean fallow	Wheat	Clover, red
High Field	34	0	33	Oats	Ditto	Turnips	Barley	Ditto
High part of Eden Riggs	15	0	0	Barley	Ditto	Ditto	Ditto	Ditto
	85	1	8					

Hurley. Soil loam, flint, chalk, and strong clay uphill. 1. Clean fallow for turnips; 2. Barley and clover seed; 3. Wheat; 4. Barley, beans, or peas; or still better, according to Mr. T. Micklem, turnips on a clean fallow, and then as before. In the second rotation it is found adviseable to change the red clover for Dutch and trefoil. This remark has been made to me by several other experienced gentlemen, and it appears founded in reason, that change should be beneficial to the soil.

Bisham. Soil loam on chalk, mixed with flints. 1. Fallow for turnips, well dressed; 2. Barley, red and white clover twice mowed; 3. Wheat; 4. Fallow with turnips, and return. Wheat once every three years.

Cookham. Soil fine loam on chalk, with flints, strong clay, and some gravel.

The rotation of crops nearly the same in the inclosed parts as the adjoining parish of Bisham: on the common field part, irregular.

VALE OF THE KENNET.

"The best land in the Vale of the Kennet," says Mr. Richard Tull, "is sown with corn every year. 1. Wheat; 2. Barley; 3. Beans, and so continued; or wheat, barley, clover and wheat." But as this can only apply to the richer soils, in conformity to the plan with which this section has been begun, I shall notice the particular rotation of crops in some of the best cultivated parishes in this district.

Hungerford. Soil gravel, some strong loam, flint and chalk. A four field system. Wheat on clover leys,

leys, fallows, or turnips; barley with seeds; oats with seeds, and occasionally pease and beans; grass two leys common. Very little clean fallowing, but vetches, &c. substituted in its place.

Avington. Soil gravelly, with some stiff land. The usual four field course.

*Shalbourn.** Strong deep soil, some flint and gravel. Well adapted for beans and wheat, which are the staple produce. The same applies to *Inkpen*, &c.

Kintbury. A gravelly loam, some clay, &c. The rotation of crops are: 1. Wheat; 2. Barley, with seeds; 3. Wheat again, or beans. Charles Dundas, Esq. M. P. and the Rev. F. C. Fowle, are both distinguished promoters of agriculture, and by their own example encourage its improvement. In this and the adjoining parishes, it is a common practice to sow wheat after turnips.

Enborne. Soil a springy gravel and clay. From the nature of the soil the course of cropping is various. The following is most usual: 1. Fallow, and then wheat; 2. Barley, with seeds; 3. Clover; 4. June fallow and turnips.

Newbury. Soil a loamy gravel, with some clay. Four field system prevalent, much turnips and barley. The rotation frequently varied, from the gardeners renting field land for a year for the culture of potatoes. Lammas wheat chiefly in the Vale of the Kennet.

Speen. Soil a light whitish gravel, loam, and clay.

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* Prosperous Farm, in this parish, was the spot where Mr. Jethro Tull carried on and perfected his interesting experiments in the horse hoeing husbandry. He died in 1740, and may be considered as the father of a rational and uniform system of agriculture. In fact, he paved the way to all the improvements that have since been made.

1. Tur-

1. Turnips; 2. Barley, with seeds; 3. Clover; 4. Wheat on the back.

Thatcham. Soil gravel, loam, and clay. 1. Wheat; 2. Turnips manured; 3. Barley, with red and white clover; 4. Grass; 5. Wheat again, is the common course; but from the great extent, and different circumstances of the parish, the rotation is various. The same applies to *Woolhampton.*

Aldermaston. Soil gravel, loam, and clay. Summer till for wheat on strong land. 1. Wheat, with clover in the Spring; 2. Clover; 3. Beans; 4. Wheat; 5. Oats, and then fallow. In *Beenham* and *Wasing* the same course of husbandry is commonly pursued.

Ufton. Soil a fertile loam near the river, gravel and flint higher up. The four field system prevails. No clean fallows, except under peculiar circumstances.

Englefield. Soil gravel and clay, with a substratum of chalk. Nothing very peculiar. R. Benyon, Esq., M. P. follows the most improved modes of agriculture on what he keeps in hand, and is ably seconded by his tenant, Mr. Stone.

Sulhampstead, Abbots, and Bannister. Soil gravel, loam, and clay. 1. Red clover, or wheat after beans, according to the soil; 2. Wheat manured; 3. Oats; 4. Turnips manured; 5. Barley, with seeds. *Tidmarsh, Sulham,* and *Bradfield,* vary little in the rotation of crops from the preceding.

Reading. Soil gravel, rich mould, strong clay, and some sand, with chalk as a substratum in several places. Rotation of crops various. Occasionally, 1. Clean fallows; 2. Wheat, with clover in the Spring; 3. Beans; 4. Oats; or if the land is clean, and in good heart, the skim is sometimes used, and with two or three plowings, wheat sown again. On the light gravelly soil, however,

however, another course is in practice. 1. Turnips; 2. Barley and grass; 3. Wheat; 4. Barley, or oats. Spring wheat is sometimes sown after turnips.

Sunning. Soil gravelly, loam, some strong land. Usual course, clover leys, wheat manured, oats or barley, with or without seeds. Sometimes peas after barley. Turnips always manured, &c.

FOREST DISTRICT.

Part of this district partakes of the gravelly nature of the Vale of the Kennet, part of the strong clay and loam of the Vale of White Horse, and part is sand and heath, almost unsusceptible of cultivation. The general character, however, is pretty distinct from the other districts, though the rotation of crops will not be found in general to be essentially different from some already enumerated.

Hurst. Soil principally a loam, combined with clay, sand, or gravel, with a substratum of clay or gravel, retentive of moisture, and in some places springy. Crops usually cultivated are wheat, barley, oats, horse and tick beans, the latter called here redwells, hog peas, turnips, clover, rye grass, and some lucerne. The usual rotation is, 1. Turnips; 2. barley; 3. Clover; 4. Wheat; and 5. Oats. On Mr. Nicholls' farm, whose natural and acquired talents, and agricultural improvements are universally allowed, it is, 1. Turnips; 2. Tartary oats; 3. Peas or beans; 4. Barley; 5. Clover; 6. Wheat; of which the 1st, 3d, and 5th crops are manured.

Lawrance Waltham. Soil tenacious clay, some sand,

and good loam. Fallow, turnips, barley, clover, and then wheat.

White Waltham, and *Shottesbroke*. Loam, clay, &c. Usual rotation of crops: 1. Turnips; 2. Barley; 3. Oats, with seeds; 4. Clover; 5. Wheat.

Oakingham. Soil strong clay, gravel, and sand, parts very springy. No regular system. A usual course is, 1. Clean fallow, and manure for wheat; 2. Beans; 3. Wheat, with dressing; 4. Oats, and sometimes clover, rye grass, and Dutch clover. Some buck wheat cultivated here.

Sunninghill. Soil light sand and gravel. 1. Turnips; 2. Barley, and seeds; 3. Green crops; 4. Wheat, and then a neutral crop. *Easthampstead* nearly the same soil and course of cropping.

Binfield. Soil strong clay, sand, and springy gravel. 1. Fallow for turnips, manured; 2. Barley, with red clover, trefoil, and Dutch clover; 3. Wheat; 4. Barley, oats, or beans, according to the nature of the land. Then fallow for wheat. The neighbouring parish of *Warfield* differs little in soil, but the course of cropping is more various.

Winkfield. Soil stiff clay, loam on clay, sand, and gravel. Clean fallow, by three or four plowings; wheat, manured; oats, with seeds; then beans.

Bray. Soil loam, clay, gravel, and some flinty land on a chalky substratum. Four field system: one fallow, and three crops on the common field land. Various courses on the enclosed parts, according to the soil.

Clewer. Soil loam, gravel, and clay. Four field system; but no clean fallows. Beans and wheat the principal crops.

Windsor.

Windsor. Strong loamy soil, much clay, with portions of gravel and sand.

On His Majesty's *Norfolk Farm*, a light soil, resembling that of the county from whence it derives its name, when Mr. Pearce wrote his Report, a five shift course was adopted: 1. Wheat; 2. One half green vetches for feeding off, one quarter potatoes or cabbage, and one quarter in buck wheat; 3. Turnips; 4. Barley, with seeds; 5. Clover. The course of cropping, however, is now more irregular; but on the authority of Mr. Frost, an active and zealous superintendant, it is generally turnips, barley, or oats, with seeds, wheat, and a sort of neutral shift, that is, potatoes; and on the sharp gravel, some rye grass is sown on the wheat, which makes early sheep feed, and gives a year's rest to the land: then turnips; and, in that case, it is a five shift course.*

The *Flemish Farm*, a strong heavy soil, used to be under a four field course, "yielding," to use the words of Mr. Pearce, "an alternate crop for man and beast." Experience, however, it seems, has taught a deviation from any regular course; but the late shifts were: 1. Oats; 2. Cabbage, and Swedish turnips *(ruta baga)*; 3. Beans; 4. Wheat. When managed according to this system, the land is kept clean, and produces ample crops†. Under IMPROVEMENTS, Chap. XII. see further observations on the very interesting subject of his Majesty's farms.

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* The Norfolk Farm contains about 800 acres; 450 of which are arable, 180 meadows, 170 rough ox leasowes, which the working oxen and some small Carmarthens graze in.

† The Flemish Farm contains 450 acres; of which 140 are arable, 230 meadow, and 80 ox leasowes.

SECT. IV.—CROPS COMMONLY CULTIVATED; THEIR SEED, CULTURE, AND PRODUCE.

I. WHEAT.

Preparation.—In the preceding sections it will be seen what tillage is commonly used for wheat, according to the nature of the soil, and in what rotation it succeeds other crops. A principal dependance being placed on this crop, and the soil in a great part of the county being excellently adapted for raising it to advantage, the greatest attention is paid to the land in which it is sown, that it may be in good heart and tilth.

The preparation for wheat in this county may be reduced to the three subsequent heads: 1. The land is fallowed and manured with yard dung, compost, rags, soot, and in some places with chalk; 2. It is folded on with sheep, where the soil is not too deep and wet; 3. Or it is sown on the back of clover leys, after one crop of grass, or two at most.

To the *first* method many objections are started, on substantial grounds, not only with regard to absolute fallowing, that is, without taking a meliorating crop, but likewise to manuring. It is questioned by some intelligent farmers, if dung for wheat is expended to the utmost advantage. If, say they, dung is used in turnips, it increases the quantity, more sheep may be kept, and the natural consequence is, more dung is made: if barley and grass succeed, the cattle kept thereon leave still more dung, and the wheat on the clover ley finds the land in the highest state of cultivation; besides the dung being brought on and worked about as a preparation

tion for turnips, the weeds are thereby destroyed. This, however, can only apply to districts where the soil is favorable for turnips, which is not the case in many parts of the Vale of White Horse. The Berkshire farmer, with a wise and liberal policy, spares no expence or trouble in obtaining manures for his favorite crop; and exclusive of animal manure, he employs every article within his reach that seems best adapted for the soil.

On the lighter lands of the Vale, about Marcham, Streatley, &c. rags are applied as a manure, and an acre properly done will cost 3*l.* 10*s.* Taggs of wool are likewise bought up at Witney, in Oxfordshire, and carried to several parishes in Berks in the line of that place, to spread on the land. At Bisham a ton of rags will cost about eight guineas, and it is found sufficient for three acres. Soot and malt dust are used as a top dressing for wheat, by Mr. Selwood of Aldworth, and others, and are harrowed in with barley.

Chalk, where it is applicable as a manure, is laid on at the rate of six or eight loads per acre; a load at the pit costs 1*s.* 6*d.*

Mr. Justice, of Sutton Courtney, however, finds by experience, that manuring for beans is much better, when followed by wheat, than the old system of fallowing and manuring for wheat, which renders the land too light, and therefore more subject to blight. In fact, the genius of the soil ought to be consulted in every thing, and the defects of nature to be supplied by art. The best manures on soils of a certain composition, may be worse than useless; while those which are least regarded, as being cheap and easily accessible, may, if applied with judgment, be productive of not only temporary,

porary, but permanent advantage. But to return from this digression.

To the second mode of preparation for wheat, namely folding, I have scarcely heard a single objection, as far as it contributes to the increase of the future crop, and on the downs and lighter soils it seems to be essentially necessary and is constantly practised; but, on the other hand, it is urged, that when sheep are driven to be penned every night, at a considerable distance from their pastures, and perhaps at the same time are crowded in the fold, as much, or even more is lost by the damage they receive, as can be gained by applying their manure in this way to the land. No doubt, regard is to be had to the breed of the animal, and its adaptation for driving, as well as to the circumstances under which it is placed in the fold; but the experienced and judicious agriculturist will naturally attend to points of this importance; nor is it probable that he should think of obliging the Leicesters, or even the South Downers, to travel six or seven miles a day, as is usual in some parts of the county for the native notts and the Wiltshire horned sheep to be under the necessity of doing, in order to their being folded where required. It is the prevailing opinion, that the horned sheep are best adapted for folding; but the Berkshire notts are not much inferior. Indeed some contend for their superiority.

Against the *third* mode of preparation for wheat, I believe no objections are made. To sow on the back of clover leys, particularly of one year, must give the fairest chance for a good crop, and it seldom fails even on light soils, if they are well rolled or trodden with sheep, at the proper seasons. Without sheep, indeed, the

the Berkshire farmer would in many districts lose his best stay: all their qualities are convertible to some beneficial purpose; their very treading is often indispensable. The wheel roller, however, and more particularly the new-invented pressing plough, are calculated to supply their place in this respect, where they cannot be employed to the requisite extent. On clover leys more especially, the pressing plough is an excellent implement, and its use will obviate the only objection to sowing on them, which is, that if the furrows are not well laid, the seed is apt to fall between them and perish.

Sort.—On the strong soils of the Vale of White Horse, CONE wheat (*triticum turgidum*, or *quadratum* of Miller) is commonly sown, though not exclusively. Cone, or bearded wheat, though it does not afford the finest flour, yields the largest quantity on stiff argillaceous soils, and is less subject to disease or damage from wet, where such soils prevail. It has likewise a greater firmness of straw than the common kind, and is therefore in less danger of being lodged, which is an object of much consequence on rich wet lands. There are several varieties; but they differ in little, besides the colour of the chaff and the form of the ears.

Of the common smooth polled wheat called lammas, there are several varieties sown in this county. It is the *triticum hybernum*, and is most generally cultivated in this kingdom, because it suits the greatest proportion of soils, and produces the finest kind of flour. It works mellow in grinding, is early ripe, and is so free, that it sometimes sheds in windy weather.

The varieties of this species which I have noticed in Berkshire are:

The white straw lammas, very common.

The

The red straw lammas, about Childrey, &c.

Red and white lammas, about Hungerford. Very little cone, except on the stronger soils, in the Vale of the Kennet.

Velvet wheat, lately introduced in several places. It is also called the hoary white, and is reckoned the most valuable of all, because it grinds mellow, and yields a very fine white flour. Mr. Boys, in his excellent Survey of Kent, says, that in a rainy season it is apt to vegetate very freely in the field, on which account it is not so proper to cultivate in a moist climate, where the enclosures are small, and not exposed to the sun and air. The grain is small, and almost transparent, from the thinness of the bran. At Stanford, in the Vale, six bushels of this variety, sown on three acres and a half, which is a very economical quantity, produced about five quarters to the acre.

Taunton white, about Lambourn and other places. The red straw is likewise much used on the downs.

Red chaff, a variety not uncommon, and esteemed by some; but I am assured by George Knapp, Esq., M. P. for Abingdon, who has had considerable experience, that it does not yield so well as the other kinds of wheat.

Chittim wheat, or golden swan, is a new variety. On the authority of Mr. Westbrook, of Bisham, it yields very fine flour, and is much valued in that neighbourhood.

American wheat has been tried by some about Wantage; but its qualities are not yet well ascertained.

Durham wheat is used by Mr. John Stephens of Reading, and found to answer extremely well.

On his Majesty's Norfolk farm, white lammas and red chaff are commonly planted; on the Flemish farm, Hedge or Chittim wheat.

White,

White, or egg-shell wheat, resembles the velvet-eared in most of its qualities, and is well adapted for rich sandy loams; but it is not much used in this county.

A red bearded spring wheat, probably the Siberian, for I did not see it, was sown by Mr. Tull, of West Ilsley, on the 5th of April, and was ripe before his winter corn. It was exactly nineteen weeks on the ground, and yielded a good return. Spring wheat (*triticum æstivum*) begins to be cultivated about Reading, and some other places. Its advantages are obvious, as it may be sown after turnips or winter vetches. When the science of agriculture is better understood, and all the improvements of which it is susceptible are adopted, it is probable that sowing wheat in autumn, on many soils, will give way to a more profitable practice, and that the land will neither lie idle under a fallow for the best part of one year, nor be encumbered with a crop during the whole or the greatest part of the next. It has been proved indeed, that on light soils more especially, winter wheat, sown in February, has produced as good a crop as if it had been committed to the ground in August or September, and that it is much less liable to be affected by frosts, or winds, which latter are apt to blow the soil from the roots. As for spring wheat, it may be sown from March to May with advantage; but it should be remarked, that the later any kind of grain is sown, the greater quantity of seed will be required, as it has less time to tiller, and therefore the crop must depend chiefly on the principal stalk. This theory may appear novel; but it is offered with diffidence, and solely with the view of inviting inquiry and experiment.

Steeping.—Steeping of seed not only promotes a more rapid vegetation, but when the corn is smutty, both

both washing and steeping are found necessary to clean it. Mr. Loveden has a very useful implement to free wheat from smut; but as it acts chiefly as a brush, it is not wholly to be depended on when the corn is intended for seed. In the Vale of White Horse, fresh seed is commonly limed and steeped in brine; or chamber lye is substituted for brine: when old, it is not always judged necessary. In the Vale of the Kennet, both liming and steeping are usually practised for wheat; and I beg leave to hazard an hypothesis, that if lenten grain, as well as wheat, underwent this operation, it would come up more equally than it frequently does, and would be a cleaner, and perhaps a heavier crop.* Neither the expence nor the trouble is great; and where the probable advantages preponderate, without any risque of injury, it is wise to adhere to established usages, and even to extend them, by analogy of reasoning, to other kinds of grain.

Quantity of seed, broad cast, drilled, and drilling, &c. —It is the opinion of the most intelligent farmers, that change of seed is always proper. Wheat, say they, should be brought from a colder soil than that on which it is to be sown: oats, barley, peas, and beans, from

* Steeping in liquid manure, on every principle of vegetable economy, must be regarded as useful, for all kinds of grain and seeds. Liming, brining, and a solution of arsenic, which last is used in some counties, can only have a tendency to destroy smut, or to check the depredations of insects; but liquid manure, or the essence of dung, has the further effect of promoting a rapid and vigorous vegetation, which, in every case, is desirable. Steeping grain or seeds in soot, diluted with water, is probably the cheapest and most beneficial succedaneum for accomplishing both purposes; but due regard must be paid to the season and to the soil in every application of this nature. Of all sciences, agriculture is least subject to general rules: this maxim cannot be repeated too often, and yet it is commonly disregarded!

warmer

warmer soils and situations. Old wheat too is commonly preferred to new, and upon rational and obvious grounds.

Sowing broad cast has numerous advocates, and is the prevailing practice in this county; but it is not exclusively so. It is the avowed opinion, however, of Mr. Frost, his Majesty's bailiff, that all kinds of grain produce most by the acre when sown broad cast, and I found he was not singular in this belief. The quantity of seed used in this way for a statute acre runs from nine pecks to three bushels. Mr. Nicholls, of Hurst, thinks the former quantity sufficient on his farm; the general quantity, however, sown is from two and a half to three bushels. The latter is probably too much, except under particular circumstances; but as it is much easier to thin than to fill up, it is thought impolitic to run any risks for the sake of saving a little seed. To an individual, the difference may not appear great; but in the aggregate throughout the kingdom it is immense. Of the 50,000 acres which it has been calculated are sown annually with wheat in Berkshire, nearly two-thirds is susceptible of the drill husbandry; by which a saving of 4 or 5000 quarters of wheat might be effected, fully equal to the support of as many thousand persons.* But this is only taking a partial view of the subject: it is the comparative

* It has been observed, however, that the attempt to save seed has brought drilling into disrepute, even where it might have been beneficially practised, by a diminution of produce far beyond what might have been, had the allowance been more liberal. Perhaps the same may be said of broad cast. Much seed is always lost by birds, by vermin, by insects, and by unfavourable seasons. Could these be provided against, a smaller quantity might be safely sown; but as they cannot, economy in seed should be regulated by prudence.

produce

produce, rather than the quantity of seed, that should determine the question. Much of the wet, and very stiff land in the Vale of White Horse, is ill adapted for drilling; and the flinty soils are equally improper, from the irregularity with which the seed is dropped, by the machine constantly meeting with obstructions. On clover leys it is likewise obviously difficult, if not impracticable.

The following observations of a Berkshire farmer deserve notice, as they are founded on a just theory, and have been confirmed by experience. "Wheat that is drilled, should not be more than seven inches wide in the drills, and should be hoed the latter end of March, or the beginning of April at farthest. When it is hoed later, it is apt to cut the tellers, and likewise lets the dry weather get to the roots of the wheat, and weakens it. As for drilling very thin, it is a bad way, as it often causes the corn to blight, by the tellers branching so late; but drilling, or sowing thick or thin should depend, in a great measure, on the condition of the land. If the land is in a high state of cultivation, then two bushels will drill an acre, and two bushels and a half will sow it broad cast; but I apprehend more people have suffered by sowing too thin than too thick. For if it is a blighting year, it will always be seen that thin wheat blights more than where it is thicker; but it is best to avoid extremes in this, as in every thing else.

"A substitute for drilling is made use of, which answers a much better purpose (except it be land subject to weeds*), and that is the nine-share plough, where

* In confirmation of the propriety of drilling, where land is very subject to weeds of a certain kind, I produce the experience of a friend of mine in Oxfordshire, on the confines of the Vale of White Horse, and adjoining

the land is dry, and can be plowed in flat lands. The land for wheat should be plowed first in the usual way, and lie a considerable time, till the ground is got hard and firm, and if the sheep go over it during the interval, so much the better. Then make use of the nine-share plough, by going with six horses, which will plow seven or eight acres a day with ease. The wheat should be sown broad cast after the plough, and the greater part of the seed will go into those little furrows, and then the root gets good hold of the ground, though some of the seed will come up promiscuously between the drills; yet I think that no disservice, as it keeps the dry weather in the summer time from scorching between the furrows. The principal advantage of this plough is, that it moves only half the ground, so that between the drills the soil is hard and firm, and therefore less subject to weeds."

This medium plan between drilling and broad cast is attended with little trouble, and on the light and dry soils is found to produce the best effects. The corn comes up with a great degree of regularity; it is less subject to blight, from the sun and air having a freer action; it affords a greater facility for hoeing and weeding, and the quantity of grain is said to be encreased. The nine-share plough is accordingly in high estimation about Great Fawley, West Ilsley, and many other

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adjoining to the insulated parish of Langford, in Berkshire, where the same fact has been ascertained. His land was so overrun with charlock, that notwithstanding all the care he could take in weeding, it did not produce, broad cast, above four sacks per acre; but by drilling, at nine inches apart, and twice horse hoeing, the charlock was destroyed, and the same land yielded between five and six quarters. Drilling, therefore, may be occasionally expedient, even where it is not constantly practised.

places.

places. Mr. Stephens, of Aldermaston, however, says that one cast before the nine-share plough, and one after, has been found the preferable mode of sowing.

Berriman's pressing plough, already mentioned, will likewise be a substitute for the common drill machines, at the same time that it answers other beneficial purposes.

Drilling by Cooke's and other machines has been tried about Faringdon, and other parts of the Vale, but discontinued from experiencing its inutility. It is used, however, by experimental agriculturists about Sutton Courtney, East Lockinge, Bisham, Cookham, and Bray.

O. Williams, Esq. M. P. of the Temple House, in the parish of Bisham, is partial to drilling; nor is the soil he cultivates ill adapted for it; and Sir John Throckmorton, Bart. of Buckland, uses Cooke's drill for all kinds of grain and pulse, except beans, which he dibbles. Some other gentlemen and farmers drill in an experimental way; but I do not find that the practice is gaining ground, though sometimes it deserves to be had recourse to, for reasons already assigned.

As for dibbling wheat, I am not aware that it has been tried in this county, though there are situations, when the land is very wet at the usual seed time, where it would be preferable to any other, on a limited scale. In this case, however, the harrowing should be performed first, and the loose soil driven into the hole by the foot, so as to cover the grain, without oppressing it.

Time of sowing.—From the diversity of soils and situations, the seed time varies considerably in this county.

On

On the richer soils of the Vale of White Horse, it seldom begins before November, or the corn would be too far advanced before winter. About Faringdon, which, though in the same district, has a less strong soil, if the seed is not committed to the ground before November, it is thought advisable to wait till February, even for lammas wheat. About Buckland, where the soil is still lighter, wheat sowing begins about the middle of September.

On the downs, it is sown about five weeks or a month before Michaelmas. On very light land as early as August. About Lambourne, which is near the centre of the downs, sowing of wheat is continued from a month before Michaelmas to a fortnight after, except on turnip land, where the vegetation of course is more rapid. That which is earliest sown on the downs and Chalk district in general, is found to be least obnoxious to the blight, and therefore the practice is regulated accordingly.

In the Vale of the Kennet, wheat is commonly sown from Michaelmas to November.

In the Forest district, the nature of the soil determines the season when the seed is to be committed to the ground; and it extends from the earliest to the latest period, already mentioned. Wherever the sowing is late, the strength of the soil supplies the want of the heat of the sun. A vigorous vegetation must depend on one, and often on both causes co-operating.

Culture, while growing.—Though great attention is paid by the farmers of this county in general to tillage, preparation, and sowing, I cannot think, from observation, that they are in all places sufficiently followed up by a due regard to the growing crop.

On the low lands, wheat is occasionally fed down by sheep

sheep in the spring, when too luxuriant, and sometimes in the autumn on the uplands. In the spring it is also rolled, or trodden by sheep, to fix the roots. It is likewise hoed in the strong soils, some times twice; on the light not so constantly, but only hand weeded. By the best farmers, however, it is hoed in every situation.

About Lambourne it is hoed pretty early in the spring, and then weeded about June. About Ilsley, where the land is commonly free from weeds, it is only weeded, which appears a defective practice, though the natural lightness of the soil probably justifies the omission. Weeds, however, ought to be more carefully extirpated than they usually are, as it is not the present crop that is injured by their being allowed to seed, but often several succeeding ones.

Women and children are most generally employed in the operations of hoeing and weeding, which they do not always perform in a perfect manner, nor with the most proper instruments.

Harvest.—In the eastern part of the county, and on the warm gravelly soils, the harvest commences a fortnight earlier than on the strong cold lands in the Vale of White Horse; but compared with the neighbouring counties, no part of it can be called late. The advantage of good tillage and manuring in this respect, as well as in every other, is perceptible; for land well managed, will naturally bring its crops to maturity earlier than where it is neglected, though exactly under the same circumstances as to soil and climate.

The sickle is the usual instrument for reaping wheat. A man paid by the day is allowed from 2*s.* to 4*s.* in harvest, if he works from six to six, and extra for later or earlier hours, besides beer; or if he is wholly maintained, his weekly wages during the month or six weeks

weeks he contracts for, will be from 9*s*. to 12*s*. Women are allowed about 1*s*. a day and maintenance; but wages vary with situation. Near towns generally, and in the eastern parts of the county universally, they are somewhat higher than in the more remote parts. The greatest part of the work of reaping, however, is done by the great, and according to the crop and the situaton; a man is paid from 6*s*. to 10*s*. and upwards per acre, for reaping and putting into shocks.* The shocks commonly consist of ten sheaves each, and are placed obliquely on the ridges, so that they may receive as much benefit as possible from the sun and air.

The corn harvest is a season of joy, as well as of labour; and its various operations are carried on with pleasure and animation. The toils of the labourer are not only sweetened by good pay, and a liberal allowance of beer, but he anticipates the feast which commonly attends harvest home; and if he sees a plentiful crop on the ground, congratulates himself on the cheapness of bread, which is its natural result.

The ricks are made with peculiar neatness. A farmer who was negligent in this respect, would be the object of observation in his neighbourhood. The labourer who can make a handsome rick, prides him-

* The farmers commonly let their reaping to their constant labourers, by which means the wives and families of the latter become employed. This practice is equally humane and politic.

Piece work is generally sought after by labourers of every description. The profligate, that by hard labour for four days in the week, they may drink the other three; and the industrious and frugal, that they may make a decent appearance, and support their families in some degree of credit. Persons of the latter description deserve every possible encouragement.

self on his skill; and as good as well as bad examples are catching, others, in imitation, endeavour to gain credit by the same means.

While on the subject of harvest, I think it necessary to advert to the practice of leasing or gleaning. Though it coincides with every feeling of my heart, and every dictate of my judgment, to rejoice in the happiness and comforts of the poor, I have seen many ill-consequences arising from leasing, and pretensions set up, which are wholly unjustifiable.

While the corn is on the ground, every hand should be employed in assisting the farmer; but though wages are generally liberal, women and children frequently find they can earn more by leasing than by labouring for others; and no sooner is the corn cut, and often before it is put into shocks, than they follow the reapers, and pick up what cannot possibly, in that stage of the business, belong to them. Instances have occurred of their contending for this as a *right*, which they ought to know is only an *indulgence*, even when the corn is carried. A farmer, therefore, is only doing justice to himself and the public, in preventing a practice which leads to pilfering and encroachment, which keeps many hands from being useful, and which, under all circumstances, should be considered wholly as a favor granted by the occupier of the land. To restrain the privilege to the younger children of labourers on the farm, or to the poor of the parish, when the field is cleared, would be advisable, on every principle of prudence and of justice. Instead of this, numbers of idle and disorderly persons issue from towns and populous villages, and set up the trade of leasing in any parish within their reach, with little regard to delicacy, and sometimes,

sometimes, it is to be feared, to common honesty. On the other hand, to see a farmer turn in his cattle before the poor have had time to pick up the stray ears of corn, is revolting to every benevolent mind, and I trust will never be a common practice. I wish only to see leasing regulated, and not abolished; to be conceded as an indulgence, and not claimed as a legitimate inheritance.

Threshing.—Under "Implements of Agriculture" will be seen a detailed account of threshing machines, on various constructions, and of different powers. They seem likely to be universally adopted on every considerable farm, if we may judge from their rapid introduction within the last two or three years. To the comparative estimates of their advantages already given, I have nothing to add; they will sufficiently speak for themselves, to those who are not under the influence of prejudice and custom.

As for threshing with the flail, it costs from 3*s*. to 5*s*. per quarter, according to the quality of the corn, and local situation; or 10*s*. and 6*d*. a week, and maintenance, may be the average wages of taskers who are paid by time. But when work is of such a nature that it can be let by the great, as it is called, engagements by time are gradually falling into disuse. The reasons are obvious, and they are very cogent; but in task work it is necessary to keep a vigilant eye over the persons employed; for more corn is lost by bad threshing than is commonly supposed. Machines practise no deceptions; and if properly constructed, and in due order, scarcely a grain will be left in the straw after their operation. The only difficulty attending their use, is the want of experienced artificers to repair occasional

 derangements;

derangements; but when they are more commonly introduced, it will be an object for good workmen to settle at moderate distances from each other, and to establish manufactories for threshing machines, and other agricultural implements.

Produce.—Under different modes of management, which have been previously explained, almost every part of Berkshire is well adapted for wheat, and it is found to be prolific in no common degree, in this valuable grain which furnishes "the staff of life."

From the averages of parishes in the different districts, it appears that the Vale of White Horse yields about four quarters per acre: the best soils five. The Chalk districts from two and a half to three and a half quarters; the light downs from two, to two and a half; the Vale of the Kennet from three to four, the best land more; and the Forest, including his Majesty's highly cultivated farms, from three to four quarters and a half per acre.

The following calculation of the expences and profits of an acre of wheat does not pretend to minute accuracy; but it may furnish some criterion to judge from. The average produce is taken at four quarters, and the price 9*s.* per bushel.

	£.	s.	d.
Rent of land - - -	1	10	0
Tillage and manuring - -	4	0	0
Seed, three bushels, at 9*s.* -	1	7	0
Hoeing, weeding, and reaping -	1	1	0
Carrying home and threshing -	1	15	0
Carrying to market and expences -	1	0	0
Incidentals - - -	1	0	0
	11	13	0

Four

	£.	s.	d.
Four quarters of wheat, at 9s. per bushel	14	8	0
Straw and haulm - - -	4	0	0
	18	8	0
Estimated profit - - -	6	15	0

Though this may appear high, from the estimate being taken from a productive soil, it cannot be considered as an unreasonable profit, when we reflect that wheat is the staple crop, and that when the land is fallowed, two years rent must be paid for the produce of one, which in that case should be added to the expences, besides interest for capital employed, and wear and tear of implements, tithes, taxes, and poor rates, all which the tenant has to bear. Indeed, with so many outgoings and risks, if a farmer cannot make full four rents of his crops in general, he is not on an equal footing, in point of profit, with respectable tradesmen, which undoubtedly he ought to be.

Haulm.—After the wheat is cut with a sickle, and carried home and secured, a certain number of labourers are employed in mowing with a scythe the stubbles, which are made into haulm, and used for thatching and for litter, as occasion may require. I have been informed, on good authority, that when this has occasionally been sold, it has fetched not less than the rent of the land on which it grew. But this could only happen when straw was scarce, and therefore dear.

Appropriation of wheat.—As Berkshire produces much more wheat than is required for the sustenance of its inhabitants, considerable quantities of it are purchased by the millers and dealers in corn, ground at the

the mills erected on its navigable streams, and sent for the supply of the metropolis.*

But besides the internal consumption, and the flour consigned to London, much seed wheat is sold, particularly from the Chalk district, into Gloucestershire, Oxfordshire, and some other counties. This seed has gained high and deserved reputation for its cleanness and its adaptation for other soils, and its sale adds in no small degree to the emoluments of the Berkshire farmer, while it is a source of future wealth to the neigbouring counties. The price of seed wheat being always higher than bread corn, every attention is paid to the goodness of the sample; and the demand is generally equal to the whole quantity that can be spared.

Diseases of wheat.—Though wheat, during the whole period of its growth, from the seed to the very moment of its being stacked, is exposed to numerous enemies, and to various accidents, the wise provision that has been made for its preservation, challenges our gratitude and admiration. By its having a *seminal* as

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* Wheat in granaries is apt to be destroyed by the weevil, the moth, and the beetle. To guard against their depredations, frequent skreening stirring, and exposure to draughts of wind and fresh air, are necessary, which will prevent the eggs from coming to maturity; but should the insects appear in a winged state, a hen with a new hatched brood of chickens will diminish their numbers, with little injury to the corn.

It is said likewise, that pellitory of the wall will destroy the weevil in corn, and that the smell of lobsters is fatal to them. A farmer, when his granaries were empty of corn, but infested with the weevil, collected in sacks quantities of the large ants, and scattered them about the premises, which soon cleared them.

In Germany they apply quicklime, slaked in water, in which trefoil, wormwood, and hyssop, have been boiled, to the walls and rafters of granaries infested by mites and weevils, which destroys them. All these experiments are worth trying.

well

well as a *coronal* root,* it adapts itself to different depths of soil, and is qualified to draw nourishment both from the surface and from the bottom. Without this double hold, it would be impossible for it, on light soils, to resist the action of the wintry frosts and the parching vernal winds, which nevertheless destroy considerable portions, and without the assistance of rolling and treading, still more would be lost.

It is not my object, however, to enter into all the particulars of the natural history of this valuable grain, or to trace the depredations of birds, vermin, and insects, all which diminish the quantity sown, and therefore it would be false economy not to make an extra allowance of seed for these contingencies, beyond what would be necessary to plant the ground, on the supposition that every grain of good seed was to come to maturity. The grub, or rather various species of grubs, are, however, the greatest enemies to the nascent plant, particularly when the autumn is mild and wet; and though lime, saline substances, soot, rolling, and treading, assist to check the mischief, by destroying part of the agents, their ravages cannot wholly be prevented.

But supposing the wheat to have overcome the numerous injuries with which it has to contend in its early state, and the husbandman congratulating himself on the prospect of a full crop, it still is exposed to diseases, which render abortive the expected returns. Between animal and vegetable life, there is an exact analogy: at their every stage they are liable to disorders

* The *seminal* root is that which issues from the seed, and is connected with the *coronal*, or root at the bottom of the stalk, by a pipe, which conveys nourishment to the ri ng plant. The length of the pipe, or the distance between the two roots, depends on the depth at which the seed is deposited.

from

from without, and dangers from within. The soil which produces the plant as well as the food which is to support man, may be unfriendly to their constitution, or their original stamina may be weakly, and the atmosphere, which has a powerful influence on both, may prevent or retard the developement of their respective qualities, and occasion a premature decay or death.

The vegetable diseases of wheat, and other crops, are principally *mildew*, *blight*, *blast* and *smut*. The three first are often confounded by writers on agriculture, nor is it finally determined if they are of animal or vegetable origin.* The effects, however, are the same, and to palliate or obviate them alone is interesting to the farmer.

Mildew, or *mucor mould*, appears to be of two varieties, the *black* and the *red*, called also the *black rust*, and the *red gum*. This disease is found to affect grain in the more advanced stages of its growth. It is generally thought to be of the fungus kind, and that by its roots it penetrates the vessels of plants, and impedes the circulation of their juices, especially when they are previously in a morbid condition. The natural wetness of the soil, or of the season, and the want of a free circulation of air, are the proximate causes of this distemper. Draining, drilling, or the use of the nine-share plough, drying manures, such as ashes, spread on the corn, and above all, early sowing, appear most likely to prevent it. It is the observation of several observant farmers in this county, that it is most inju-

* I am inclined to think they are both. There is scarcely a vegetable that does not support animal life. When the former is produced, from whatever cause, it is soon found to be peopled with the latter.

rious

rious to late crops, because the ground is naturally more damp the nearer the approach of autumn.

Blight, or *uredo*, is likewise most prevalent in moist seasons. In this disease, the green blades and stalks are first attacked, and exhibit spots of a black or rusty colour; and after the grain comes into ear, some of the spikes are wholly empty, others partially so, and not unfrequently one grain is sound, and the other alternately an empty husk, covered with spots of a black or rusty cast. Whether this disease is of animal or vegetable origin, has been much disputed; but it is generally found to be induced by sudden changes of the weather, when the wheat is in a milky state, particularly by hot gleams of sunshine after rain, which exhale the moisture from the earth, without the aid of winds to dry it up. Hence it is less common in open fields then in close enclosurses, and not so injurious on hilly districts as in those that are low and flat. Barberries growing in the hedges are thought by some to occasion blight; and I can assert, on good authority, that where some of those shrubs were mixed with the hawthorn fence, exactly in their direction, the corn was blighted to some distance, while other parts escaped. I state, however, the simple fact, without arguing on the cause that produced the effect. Barberries, as any person may observe, are generally loaded with animalculæ; but the number of such plants is too small to produce any extensive mischief to surrounding objects.

The *blast* is supposed to proceed from lightning, or the intense heat of the sun, when the corn is in that state most susceptible of the action of stimuli. Blackish patches in different parts of the field mark the effects. Against the producing causes no remedy can be applied; but happily the mischief is seldom extensive.

Smut

Smut, ustilago, is a vegetable disease, totally distinct from the preceding; and though it is sometimes self-produced, it generally arises from seed which has been infected with it, and not sufficiently purified by washing,* or the use of the customary steeps. It is most prevalent, however, when the weather is wet, during the season of the wheat being in blossom, which prevents the plant from being properly impregnated with the *farina fœcundans;* hence a sort of black meal is produced in the place of seed. Sometimes smutty and sound ears are found proceeding from the same root; and occasionally both smutty and sound grains are seen in the same ear. In short, its appearances are too well known to require further description. But whether smut is occasioned by animalculæ or fungi, or by both, or whether it is solely a defect in the impregnation of the seed, to which latter opinion I incline, is still, like other vegetable diseases affecting wheat, undecided among agricultural writers.

It may safely be affirmed, however, that the best preventives for this and other diseases to which corn is subject, are sound seed, good tillage, a free circulation of air, and indeed whatever promotes a healthy and vigorous vegetation, and consequently an early harvest.†

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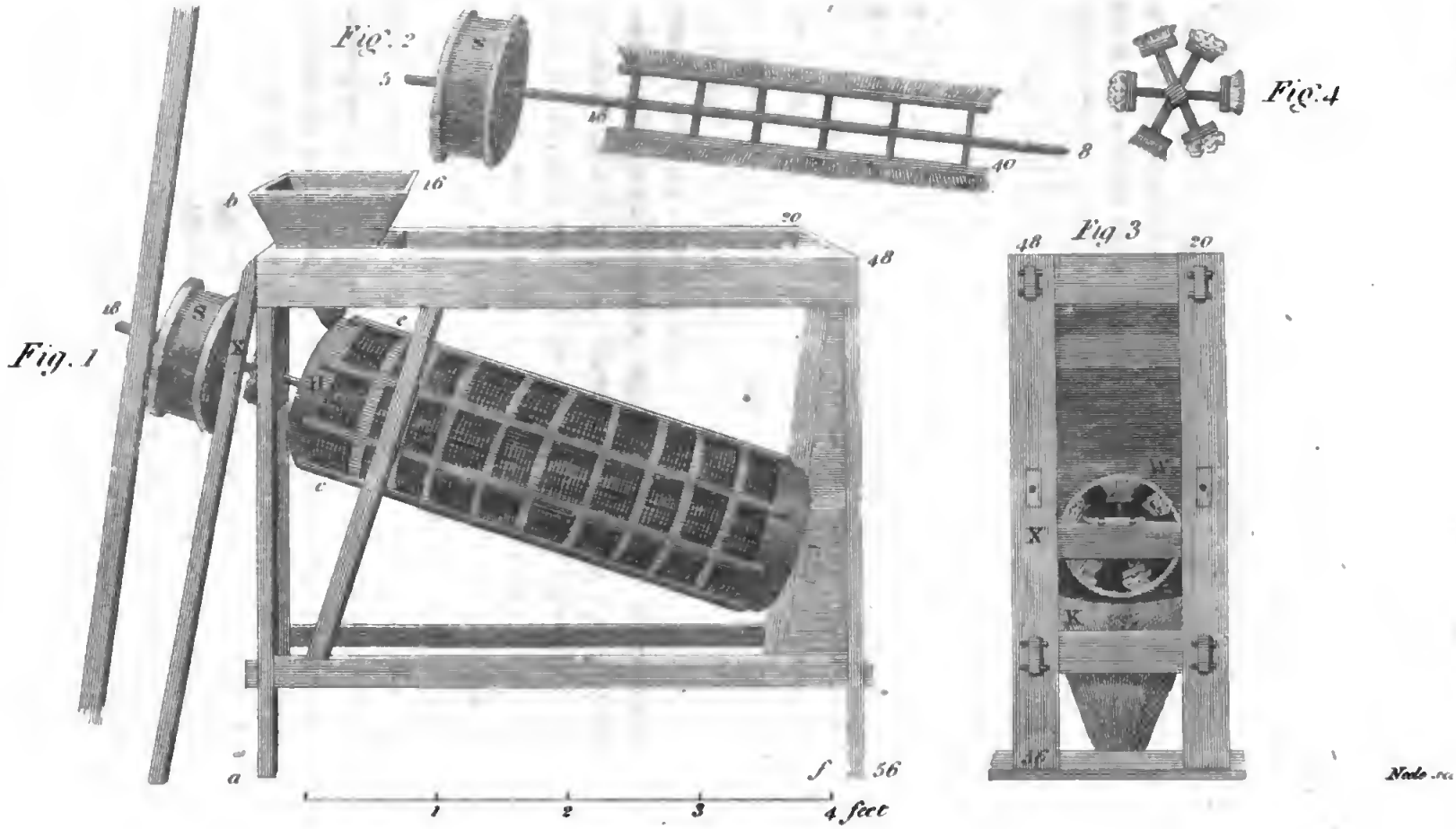
* Smut in wheat, for common purposes, may be removed by a machine with brushes, invented for that purpose; if for seed, it should be put in a trough, or wicker receptacle, under the spout of a pump, or the fall of a stream, and briskly stirred about, till the pernicious substance floats away or can be skinned off.

If intended for flour, after this washing, it must be dried on a malt kiln, for the space of eighteen hours, but heated so as not to exceed eighty-five degrees of Farenheit's thermometer.

† From Ellis, in his "Chiltern and Vale farming explained," I quote the

(A. Machine to clean Smutty Wheat.)



Neele sc.

II. BARLEY.

Next to wheat, barley is the principal crop in this county, and it is commonly sown under the most favorable circumstances for its yielding a plentiful increase. Having already, at considerable length, shewn the rotation of crops, it will be unnecessary in the sequel to notice the order in which they commonly succeed each other. In Berks, however, wheat is sometimes sown after turnips, and the practice seems to gain ground, from the advantages which have been found to attend it in particular situations; but in general, barley succeeds to turnips, and is usually sown with grass seeds.

Preparation.—When barley follows turnips, the land is always in good heart, from the previous manure, and what is dropt by the sheep in feeding them off. According to the nature of the soil, the land is then plowed once, twice, or thrice, till it is duly pulverized, and made very smooth. Scuffling, however, in most cases, would save one plowing, and probably be more beneficial. The expence of plowing is so very considerable, from the number of horses commonly used, that every succedaneum to diminish it, is both a public and a private benefit. I would beg leave likewise to

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the following passage on the subject of diseases of corn. "I know no other way to hinder and overcome them, than the use of the rope, (that is drawing a rope over the corn held by two men going up different furrows) the draining of wet grounds, and giving them their due plowings and the not planting trees in the hedges of narrow enclosures; for in open fields, when wheat is felled and thrown down by the violence of wets and winds, it is often raised again by the sun and wind's strength; when in the small enclosure, it remains blasted, without recovery, for want of necessary room." The Berkshire farmers act on this belief, and therefore wisely leave corn lands open, when circumstances permit.

recommend

recommend the use of the nine-share plough, in preference to sowing part of the barley under the furrow, and part on the surface, which has a natural effect to bring the grain up unequally, and hence it never ripens at the same time.

Sort.—Spring barley (*hordeum vulgare*) and its variety, the rath-ripe are most commonly cultivated. The latter is produced from warm gravelly soils, and if sown on cold or strong land, will ripen a fortnight earlier than the other for the first year; but the seed requires frequently to be changed to produce this effect; and indeed a judicious change of seed, seems indispensable for barley, above most other kinds of grain. The long-eared barley (*hordeum zeocriton*), and the sprat, or battledore barley, (*hordeum distichon*) appear to be well adapted for different parts of this county. Mr. Daniel Heath, of Little Coxwell, sows winter barley (*hordeum hexastichon*), feeds off in the spring, and gets a good crop of corn after; but the practice is not common, though found to answer.

Steep.—I believe barley is seldom steeped; yet if it were immersed in dung water for about twenty-four hours, there cannot be a doubt that vegetation would be quickened, and that the grain would come up more regularly.*

Seed, quantity sown.—The difference in the quantities of seed sown, and particularly of barley, in different parts of this island, is truly surprising. In the northern parts, from two to two bushels and a half per acre, are thought sufficient; † and experience shews, that pro-

* The only danger attending this practice is, that soaked seed is apt to burst, if much rain falls before it comes up. The time of steeping, therefore, should be proportioned to the expected risk.

† "I have known," says a Berkshire gentleman, "only one bushel and a half

vided the land is in good condition, that quantity would produce a fuller crop, without the danger of its lodging, or its being stunted from its thickness. In this county, four bushels per acre is the average quantity, which certainly is too much, if sown at the proper season; but if the farmer is under any apprehensions that he should suffer from not sowing the usual quantity, he may try the result of a smaller proportion of seed on an acre, or a single land, till he has gained confidence from experience.

Drilled barley, of course, has less seed than when broad cast; but we have already seen that the practice of drilling is far from being common.

Time of sowing.—This varies according to soil, and other circumstances, from the middle of March to the middle of May. The later the seed is sown, the more in quantity should be allowed; but barley will bear late sowing better than any other kind of grain; and frequently the turnips cannot be eaten off to allow it to be very early. The rath-ripe barley has been known to be only nine or ten weeks on the ground.

Culture, while growing.—The land being commonly free from weeds, barley does not require any particular attention while growing.

Harvest.—After the peas, oats, and wheat are reaped, the barley harvest commences, which takes place about a fortnight earlier in the eastern than in the western parts of the county. It is generally mowed, which is at best a slovenly mode of conducting the business; and even on this plan it costs from 2*s.* to 3*s.*

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a half per acre sown, and the crop was still remarkably good, but the land was in excellent heart."

per

per acre; whereas when mowed with a cradle scythe, whose form is well known, tied and shocked, the same as wheat, its expence does not exceed 7*s*. The saving of the grain is infinitely greater than the difference of the charge; and the practice of Mr. Harbottle, of Remenham Farm, in this, as well as in various other respects, is highly to be commended. Where the crop is very short, indeed, as is sometimes the case on the downs, the usual method of mowing may be excusable, but seldom under other circumstances.

Threshing.—If done by the flail, this costs from 1*s*. 6*d*. to 2*s* 6*s*. per quarter. In threshing by the machine, the saving on barley and oats is much greater in proportion than on wheat.

Produce.—This varies from two and a half to eight quarters per acre. On the downs it is from two and a half to three quarters, commonly; in the Vale of the Kennet four or five quarters, and five or six on the best land, generally. From thirty acres of land, however, in the neighbourhood of Wallingford, sown with barley after turnips, 240 quarters, or eight quarters per acre, were produced; but this was reckoned an extraordinary return.

Appropriation.—The refuse of the barley is given to poultry, and considerable quantities are applied to the feeding of pigs. The best samples, however, are malted, brewed in the county, or sent to London, and other places, as will be seen under Commerce; and of the produce of the Chalk district, much is sold for seed into Gloucestershire, and other neighbouring counties.

III. OATS.

Though oats are cultivated to a considerable extent in this county, and the soil in many places is excellently adapted for their produce, I question whether the average quantity is much above the internal consumption. So many horses are kept for agricultural purposes, and so many for the saddle or the carriage, that no great surplus can be expected from Berkshire more especially; and indeed the immense importation of oats annually into this kingdom, shews that we are pursuing an impolitic system, either in keeping such a number of horses, or in not raising a sufficiency of corn for their use. It was justly remarked by Dr. Beeke, of Ufton, that farmers in general were too fond of sowing barley after turnips; whereas, if they were to sow oats, the importation of that grain would cease to be necessary, and any deficiency of barley might easily be supplied in the distilleries by the use of sugar and molasses, which would at once relieve the West India trade, and encrease the revenue. This hint deserves the notice of politicians.*

Preparation.—As if oats were considered as the outcast crop of nature, they are almost always consigned to ground in an exhausted state, or which is thought applicable to no other purpose. They are generally sown on wheat stubbles, once plowed, or on poor land lately broken up, where indeed they flourish extremely, but which they soon render more worthless than before. In fact, however, they will grow on cold tenacious wet soils, or on light arid downs; they despise no situation, they receive no immediate ma-

* Since this was written, the legislature has attentively considered the subject.

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nure, nor culture while growing, and yet they are generally a grateful and productive crop. After green or meliorating crops, they are found to thrive extremely well, but they do not commonly receive this indulgence.

Sort.—The common oat (*avena sativa*) is most usually cultivated in this county; but the naked, or pilcorn oat (*avena nuda*) seems best adapted to the light down lands. The Tartarian or Siberian oat, supposed to be a distinct species, and unnoticed by Linnæus, is, however, getting into vogue, and is raised on very different kinds of soils, though it will grow on the very worst. Though the produce is abundant, it does not meal well, and it ripens late, which render it inferior to the red Friesland or Dutch oat, and some other varieties.

Seed.—From three to four bushels per acre, and upwards, according to soil and season, almost always sown broad cast, except by a few gentlemen, who drill all kinds of grain, as has been previously mentioned.

Time of sowing, &c.—Between February and April: the later the seed time the more is sown, as is usual in other kinds of corn. Rolling is commonly used, as soon as the land is sufficiently dry. While growing, thistles, and other large weeds, are cut up, or extracted, but no other attention is paid to the crop. Oats are favorable for young clovers, as they seldom lodge.

Harvest.—They are generally ripe before wheat, and are mowed at the expence of from 1*s.* 8*d.* to 3*s.* per acre, besides beer. When a very full crop, they are sometimes, however, put into sheaves about Reading, and on Remenham Farm the cradle scythe is used, as may be seen under Barley, and at the same cost per acre.

Produce, &c.—*Threshing* oats by the flail is from 1*s.* 5*d.* to 2*s.* 6*d.* per quarter. The *produce* in the Vale of

of White Horse from seven to ten quarters on the best land per acre: the average between five and six. On the downs from three to five quarters; in the Vale of the Kennet from four to six; and in the Forest district about six quarters per acre, on an average. Tartary oats, however, about Hurst and other places yield nine or ten quarters per acre; but they are reckoned less nutritious for horses than the common oats, though if a good sample, they fetch nearly the same price, and therefore are more valuable to the farmer.

The application of oat straw is well known.

IV. BEANS.

As the strong clay and loamy soils of Berkshire are excellently adapted for beans, though they will thrive in any situation where the land is sufficiently deep, and the substratum cool; large quantities of this crop are cultivated in this county, notwithstanding the expence that attends it, and the risks to which it is exposed from that destructive insect the black *aphis*. Having a tap root, beans are usually sown after white crops; and though some will not allow them to be a neutral crop, from the hoeings they receive, they free the land from weeds, and put it in good tilth for wheat or other corn. It has been doubted, however, whether they deserve to be cultivated to the extent they are; and if vetches would not yield more food for cattle, and prove a more meliorating crop.

Preparation.—Mr. Justice, of Sutton Courtney, finds that manuring for beans, to be followed by wheat, is better than the usual practice of manuring for the latter; but this mode of proceeding is not yet commonly

adopted. They more generally succeed wheat or barley, and are plowed for once, as soon after the wheat seed time as circumstances will permit, that the surface may be meliorated by the frost. A stale furrow, when it gets tolerably dry, is thought preferable; and for the lenten crops in general, this mode of management is strongly recommended by many intelligent farmers.

Sort.—The horse, or common bean (*vicia faba*), and the tick, are the only two varieties cultivated on a large scale. The former is well adapted for the stiffer soils, though the latter are said to be most productive, and to fetch the best price.

Planting, &c.—Beans are never sown broad cast in this county. In the eastern parts, or Forest district, and the bordering part of the Chalk district, they are not unfrequently drilled; but from the largeness of the seed, the machines in common use do not always drop them regularly, and therefore present objections to the practice. Indeed, Sir John Throckmorton, who drills all other kinds of grain, dibbles this; and throughout the greatest part of Berkshire, they are put in by the hand. Women and children, as well as men, are employed in this service, which costs about *3s. 4d.* or *3s. 6d.* per acre, on an average.* This operation begins as early in February as the season will allow; but it may be performed as late as March. Early planting, it is thought, is a preservative against the black *aphis*; but the soil must not be too wet, and severe frost succeeded by a sudden thaw is extremely destructive to the nascent plant. Steeps are never used; but for late planted beans they appear to be proper.

* Beans are commonly dibbled by a line across the ridges.

Seed,

Seed, quantity of.—From two to three bushels of horse beans are planted, and from three to four of ticks, per acre. The seed is covered by the foot, the dibble, or the bush.

Culture, while growing.—When beans get about half a foot high, or less, they are always hand hoed and weeded; which operation is repeated before they come into blossom, by all good farmers. The expence of hoeing is nearly the same as for dibbling, or rather higher, for the first time. Topping the plants likewise, just as the blossoms are set, would not only improve the quality, but increase the quantity, and forward their maturation. The cost and trouble, however, commonly prevent this operation.

Harvest.—Beans are a late crop, and are seldom ripe till the end of August, which frequently prevents a due tillage for the succeeding crop. If, therefore, an earlier variety could be introduced, it would be attended with several manifest advantages. They are generally cut with a hook, or cradle scythe, bound up in sheaves and shocked. This costs about 7*s.* or 8*s.* per acre. Beans should be cut as soon as the pods turn black, but before they become wrinkled. They are apt to shed, if left too long on the ground.

Threshing.—Before they are threshed, they should remain some time in the stack; if twelve months, they fetch a proportionate price to the delay. The price of threshing is from 1*s.* 4*d.* to 2*s.* per quarter.

Produce, application, &c.—The produce throughout the county is from three to five quarters per acre; in some situations more; but the utmost returns are comparatively inadequate to the expence. They are chiefly given to labouring horses, and occasionally to pigs intended for bacon. When wheat is dear, it is

shrewdly suspected that portions of them are ground by the mealmen, and mixed with flour. They also constitute a principal article of food for the African and West India negroes. Large quantities of the Berkshire ticks are likewise sold for seed.

The straw, or haulm, is used to litter farming horses, strewed over the farm yard, and sometimes employed for fodder. In some parts of the Vale of White Horse, the stubbles are collected by the neighbouring poor, and burnt as fuel, the farmers being allowed the ashes in return.

V. PEAS.

Peas (*pisum sativum*) are frequently a profitable crop, and thrive on lands not strong enough for beans, but which they excel in almost every quality that can recommend them to the attention of the agriculturist.

Preparation.—Peas are very rarely manured for, and generally follow wheat on a stale furrow, or otherwise, according as the business of the farm is in forwardness. One plowing is usually thought sufficient.

Sort.—The grey hog pea being best adapted to the purposes of the farm, is most in use; but the white boiling pea is cultivated by several of the most enterprising farmers; and I would beg leave to recommend a trial of the American pea, which has answered extremely well in the hands of some friends of mine, on a soil similar to many parts of Berks.

Planting, &c.—In the eastern parts of the county, peas are commonly drilled; in others they are dibbled, or sown broad cast, which last is the prevailing practice. When drilled, three bushels are allowed to an acre;

acre; dibbled about two and a half, or a little more; and broad cast, four bushels. Dibbling costs on an average the same as beans,* that is, about 3*s*. 6*d*. per acre, which is saved in the quantity of seed, independent of the superior prospect of a large increase. On farms, they are committed to the ground in February or March, and during their growth are weeded or hoed, according to the mode in which they are planted.

Harvest, Produce, &c.—They are severed from the ground by a hook or sickle, by a mode of operation, called *hacking*, which costs from 3*s*. to 4*s*. per acre. Being thrown into little heaps, or wads, they are turned, from time to time, till they are fit for carrying; and as harvest commonly commences with this crop, from long days, and the probability of fine weather, they are often fit for carrying on the second day.

Threshing peas costs from 1*s*. 6*d*. to 2*s*. a bushel; and the produce per acre is from three to five quarters. A field of white, or boiling peas, containing twelve acres and a half, in the Vale of the Kennet, produced this year (1807) at the rate of 6*l*. 4*s*. per quarter, the sum of 220*l*. but then it will be recollected that peas in general were a failing crop, and consequently very dear.

Appropriation.—Peas are applicable to various purposes. When green, they constitute an agreeable summer luxury, and the white pea in winter enters into the composition of soups, &c. The common field pea is chiefly applied to the fattening of hogs, which they will do in proper proportions, as expeditiously as al-

* Occasionally, beans and peas are sown, broad cast, together, when they obtain the name of *blendings*. For feeding hogs, ticks and peas appear to be very proper; and by being raised on the same land, the beans support the peas, and thus keep them from rotting. The practice, however, is not common in this county.

most

most any kind of food, and are thought to improve the flavour of the bacon.

The straw is eaten with avidity by young cattle in the farm yard, or, cut into chaff, serves as provender for draught horses.

VI. RYE.

This kind of grain (*secale cereale*) though formerly pretty extensively cultivated, has now become so unfashionable that the gentleman on whose estate five quarters of rye is charged annually by Sir Richard Lovelace, the ancestor of Lord Lovelace, Baron Hurley, for the use of the poor of that parish, finds it sometimes difficult to obtain it in Berkshire. It is raised, however, on his Majesty's farms, and is recommended by Mr. Stone, of Baslidon, as a good preparation for turnips. On the downs it is found in small quantities for spring feed; but I am not aware that it is regarded as a principal crop in any parish or district within the limits of my survey; though, as it will grow on the poorest soils, and even on land that is exhausted for every other purpose, and is ripe as early as the middle of July, it appears to deserve more attention than it meets with at present. I take the following quotation from Mr. Pearce, and I find his sentiments approved, though not commonly acted on. "On those open parts of the downs," says he, "where the sandy soil predominates, the sowing of rye, to be fed off, where wheat will not succeed, would in my opinion insure much better crops of turnips than what are generally seen in this bleak part of the county. The advantage resulting from this

this method would be, increase of food, an increase of stock, and consequently an increase of manure; by dint of which only the farmer depends on a crop of grain here. His trouble and expence would be inconsiderable in adopting this practice; inasmuch as the land would be broke up only in the autumn instead of the spring; and in return for this he gets sheep feed, and dresses the land well for that crop, which, above all others, ought to have plenty of manure buried with the seed."

Rye, if intended for a crop, may be sown at the rate of two bushels per acre, about the same time as wheat: if for spring feeding, three bushels will not be too much. Rye, mixed with flour, makes very nutritious bread.

VII. BUCKWHEAT.

Buckwheat *(polygonum fagopyrum)* is seldom cultivated on any large scale in this county. Mr. Loveden sows it among his young plantations of trees, to protect the roots from the drought, as well as a support for game; and in some other parts of the county I have seen it used as a meliorating crop, and for feed, or intended to be plowed in as a manure.

Mr. Pearce recommends, that in order to prevent crops from being sick of a repetition of the same crops in endless succession, buckwheat should sometimes be sown after wheat, instead of barley. It is a crop, he observes, neither impoverishing nor unprofitable; and after harvest, if it is soon got up, vetches might be sown on the same piece for spring feed; after which, the land would be in excellent condition for turnips, and then barley.

The plan seems rational and consistent with good husbandry;

husbandry; but the following remarks have been made upon it, which I submit to the judgment of the experienced. "Where buckwheat is recommended to be sown on light lands, I think it would be better to sow or drill peas on some part, and the remaining part with vetches, either for horses or sheep; and then sow it with what is called stubble turnips, that is, by plowing the land once, as soon as the vetches and peas are off the ground, and sowing with turnips to be fed off in the spring. Then plow it three or four times, and sow it with turnips again, and after that with barley and grass seeds."

From one to three bushels of buckwheat is sown per acre, during the month of May or June. Sometimes two crops have been obtained in a favorable year. The seed makes a nutritious meal, fattens hogs, poultry, and game, and the flowers are much relished by bees, at a season when food is scarce; but it is chiefly raised as a fallow crop, and to be fed off, or plowed in on soils which it would be difficult to manure. A light mellow soil suits it better than a stiff one.

VIII. VETCHES, OR TARES.

Nothing is more entertaining than to trace the revolutions of agriculture, and to mark the progressive steps by which it acquires a rational and systematic form. When the cultivated vetch was first introduced from Flanders, for several of the wild species were indigenous, it was cultivated for the sake of its seed, which was given to horses; while the stalk, the most valuable part of the plant, was wholly neglected. Vetches are now sown to a large extent in the best managed counties, where

where sheep are a principal object, and in Berkshire especially, they are used to supply the want of turnips, where that valuable root cannot be raised to advantage, and in other situations, not unfavorable to its growth, they are rendered auxiliary to its use, or a succedaneum for its occasional failure. But though they are principally employed as a spring feed for sheep, they are highly acceptable to all kinds of cattle, and are frequently given to working horses in their stalls during the summer season, who thrive remarkably on them, though, from their laxative quality, it has been found that they are more serviceable when cut and mixed with hay. In that mode of application, they would fatten both sheep and bullocks, with very little further expence. Cattle and sheep, however, put to vetches, should have them sparingly at first, and be kept in motion, or many of them will be blown. Nor does the land receive less benefit from the growth of tares. By covering its surface, they destroy weeds, secure it from drought, and render it fit for the reception of other crops.

In the Vale of White Horse, part of which is ill adapted for the turnip husbandry, the greatest advantage has accrued from the introduction of vetches. On the downs, they have likewise been tried with some degree of success, though, from the lightness of the soil in many places, winter vetches, from exposure to the frosts and the winds, are apt to die away; and such as are sown in the spring, unless the summer is unusually wet, seldom yield a very good crop. In all situations, however, they are worth trying; and the judicious farmer has now so many kinds of green crops to select from, for the support of his stock, that if one kind does not suit

suit his farm, he is inexcusable if he does not employ another, to keep up the necessary succession of feed.

Sort, Seed, &c.—The vetches commonly cultivated are of two kinds; the winter vetch (*vicia sativa*), and the spring vetch (*vicia lathyroides*). The former may be sown from the middle of August to the middle of October, at the rate of two or three bushels per acre, with a sprinkling of rye, if broad cast; but considerably less, if drilled. The land is not often manured, and once plowing is thought sufficient. Care must be taken to prevent the stagnation of water on the land. Spring vetches may be sown any time in the months of March or April. It is not unusual to sow a little barley or oats with them, to keep the stalks from trailing and rotting. Whether winter or spring vetches, it is advisable not to sow them at once, but at short intervals from each other.

Culture, Harvest, &c.—If vetches are rolled as soon as the ground is dry in March, and if the larger weeds are pulled up in the following month, they require little further attention.

The winter vetch is generally most productive, and will yield on a good soil about twelve tons of green food, or three of dried, per acre. It is often difficult to dry such succulent plants sufficiently for hay, otherwise it would be superior to any. The spring vetch is two or three weeks later than the other, and thus keeps up a succession of green feed, to which purpose both sorts are usually applied. As soon as they come into blossom they are fed off by sheep, principally ewes and lambs, within hurdles; but the part they have gone over should be left open, that they may have room for exercise. Sometimes, as has been previously observed,

they

they are cut and given to horses, and occasionally they are plowed in as a manure, in situations inaccessible to a less expensive mode of fertilization. This, however, is seldom practised, from the necessity the farmer is under of providing for his stock.

When left for seed, in which way they likewise make a profitable return, they are mowed in the usual way, and turned till dry; after which they are carried and stacked, in order to be threshed out the first opportunity. The straw in that case serves for litter, and the produce, which may be about three or four quarters and upwards per acre, will, at a medium price, for it fluctuates extremely, well repay the farmer for his expences and labour; especially when it is considered that vetches are commonly grown on lands which, by the old mode of husbandry, used to lie fallow. In fact, vetches may be reckoned among the most valuable of crops.

IX. RAPE, OR COLESEED.

Though this crop is not wholly neglected, it is not so generally cultivated as its importance deserves. It is the *brassica napus* of Linnæus; and though the preparation for it is in almost every respect similar to that for turnips, it will thrive on soils where the latter will not, with equally beneficial effects to the future crop, if fed off on the ground.

Rape is usually sown broad cast, at the rate of two pounds of seed per acre. If drilled, less is sufficient, in which case the rows should be twelve or fourteen inches apart. It should be sown in June, and it may be so managed as to come in a high state of perfection

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in March and April,* when feed for sheep is commonly scarce. Sir John Throckmorton, and others, cultivate it, in order to supply this deficiency, and find it remarkably useful. One acre of rape will yield more feed than two of turnips.

If raised solely for seed, it should be cut and threshed on clothes in the field, as soon as ripe, which will be about July or August. The value of rape oil is well known; and after it is expressed, the seeds will fatten oxen, or manure land. Even the dry straw or stem is applicable to various purposes, in the economy of the farm yard.

X.—1. TURNIPS.

Of all the improvements in agriculture that modern times have witnessed, the general introduction of turnips is the chief, and forms the basis of all the rest. The culture of this valuable root has not only gone a great way to explode the expensive system of fallowing, but it has tended to clean and meliorate the soil, and render it more productive, at the same time that it enables the farmer to keep a much larger stock on the same quantity of land.

Such being the obvious advantages of this beneficial crop, it cannot be imagined that they are not fully perceived in a county that boasts of so many good cultivators; yet it must be confessed, that the prevailing practice of sowing broad cast, is not always the most

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* Rape will bear transplanting as well as cabbages, and therefore any blanks may easily be filled up about October or November, by which an uniform crop may be secured.

judicious

judicious that might be used, as will be apparent from the following considerations.

Turnips having a tap root of a foot or more in length, unless the subsoil is of sufficient depth, which is rarely the case, in the Chalk district more especially, it is manifestly improper to sow broad cast, when every difficulty might be obviated, and every advantage secured, by drilling. The practice of Sir John Throckmorton, and of Mr. Harbottle, who occupy lands of a shallow soil, ought therefore to be a model to others similarly circumstanced.

Mr. Harbottle, who follows the North of England system of husbandry, uses double mould board ploughs, both for turnips and potatoes. His process of cultivating turnips is this: After the land has been brought into good tilth by three or four plowings, it is thrown up into ridges about sixteen or twenty inches apart. The dung is then spread in the intervals, after which the ridges are split down on the dung, and the seeds sown with a small drill, to which a roller is attached, that levels before, and in the return covers the seed. During the season the land is cleaned, as required, of weeds, by the scuffler or double coultered plough, and the plants are twice hand hoed, and set out about fourten inches asunder. His produce is from twenty to thirty tons per acre. The last operation with the double mould board plough is to earth up the soil to the plants.

" The Vale of White Horse, for twenty miles west of Wallingford, is, generally speaking, unfavourable to the turnip system. If a good crop of turnips is produced, and fed off dry by the favor of the season, and the land afterwards sown with barley, it will not produce more than twenty bushels to the acre. The cause may

may be, as the land is cold, and turnips so likewise; this may render it unfit for the succeeding barley crop; but whatever may be the cause, experience shews the effect to be always as above stated."*

Now, admitting this to be the case, would not drilling turnips in a deep and rich soil assist to dry the land, and render the practice nearly as advisable as on the weak and shallow soil? A wet soil, if sown broad cast with turnips, will be too much poached by sheep, independent of the injury the animal receives from being penned upon it; and it is doubtful if turnips ever answer so well, unless they can be fed off where they grow, particularly when applied to sheep.

In the Vale of the Kennet, and other parts where the soil is dry and sufficiently deep, sowing broad cast may answer very well; but, on competent authority, I beg leave to recommend drilling in the situations already indicated.

Preparation.—Turnips begin to be sown after tares, and the practice seems to be a good one, as it keeps up a succession of feed. If, after the more customary crops, the land is plowed three or four times, and well manured with yard dung, it is then thought fit for receiving the seed. They are sometimes likewise sown on pea stubbles, &c. and are found to answer, though at little risque or expence.

Sort.—The common turnip *(brassica rapa)* has several varieties. The large green top, the white oval, and the red or purple topped, are most usually cultivated. The tankard turnip, so called from its shape, is likewise valued by some; but it is thought to be less hardy than the preceding. More attention should un-

* Observations on Mr. Pearce's Report.

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doubtedly be paid to collect seed from plants which are found to bear the frost, and to grow to a good size. In most fields we see a mixture of different kinds, which would allow scope for selection.

Seed, &c.—About two pounds, or rather less, is sown per acre, and frequently without steeping, though in dry seasons, and to preserve them in some measure from the fly, steeps, as well as a mixture of finely powdered brimstone, in the proportion of an ounce to a quart of seed, would probably be found beneficial.

The usual time of sowing is June and July. As turnips are a very casual crop, it is necessary to sow some earlier than would otherwise be thought proper, that there may be a chance of supplying their place should they miss. A showery season is always, if possible, to be chosen for performing this operation; for though various expedients have been resorted to for destroying the fly, the slug, and the worm, those inveterate enemies of turnips, none of them are found equal in the securing of a good crop, to the advantages of moisture; and this is undoubtedly promoted by sowing with a drill, instead of broad cast, another argument in favor of the former practice.

Cultivation, &c.—Turnips are twice hand hoed, at the expence of from six to ten shillings per acre. The last, or second hoeing, is usually two or three shillings per acre less than the first. They are commonly fed off on the ground by sheep intended for the butcher, which have a certain portion of hay allowed them in cribs, and the hurdles are moved as occasion requires. But they are likewise applied with advantage to the feeding of cattle and pigs. In this case, however, they must be drawn, and carried to the stalls or the sties. As a kitchen vegetable,

getable, turnips are also well known to be acceptable to many persons.

2. THE SWEDISH TURNIP, or *Ruta Baga.*

This species begins to become a favorite in many parts of Berkshire, though a very few years ago it was little noticed. It is cultivated nearly in the same manner as the common turnip, except that it is sown as early as May, and is supposed, from the greater length of its tap root, to require a deeper soil.

It has the advantages over the common species of resisting the severest frosts in this climate, and of being as good and fit for use in the new year as the other kind is in the end of the old, thus forming a link in the succession of feed for stock, and saving the expence of hay.

The *ruta baga* is sweet to the taste; and from its superior firmness, and nutritive juices, will fatten cattle or sheep in less time than the common species; but being a slow grower, it is supposed to exhaust the soil more; though for the rich deep loams of this county it possesses every quality that can entitle it to a preference.

XI. POTATOES.

The potatoe *(solanum tuberosum)* is not only the most useful, but the most profitable of all roots, as it will yield, on a proper soil, and with due cultivation, a profit of from 10*l.* to 15*l.* per acre. As an article of human food its value is well known; and to it justly belongs the title of the "root of scarcity;" for where it is to be had in sufficient abundance, and at a moderate price, though scarcity of bread corn may threaten, famine

mine cannot approach. Nor is it less useful in feeding animals, particularly hogs, by which means large quantities of barley, peas, and beans are saved.

Of a root so truly valuable, therefore, the culture cannot be much encouraged; and whatever difference of opinion there may be in regard to the quantity of land that might be beneficially attached to cottages, all parties seem to agree, that the poor man ought to occupy land enough to raise potatoes for his family use, and a surplus to feed his pig. To allow this, portions of waste land should be assigned to those cottages where it cannot conveniently be laid round them, and the poor should not only have facilities offered them, but encouragements held out for raising a plant which, next to bread, may be considered as the staff of life.

It is with pleasure the Reporter observed, in his various progresses through the county, that the gentlemen of Berkshire are ever ready to give their labourers and dependents these desirable advantages; and that spots by the road sides, and in other situations, formerly consigned to sterility, or to the growth of noxious weeds, are now planted with a root which increases the comforts of the poor,* and diminishes the expences of the community.

It may naturally be concluded that every farm has its potatoe ground; and in several places, potatoes are cultivated on a large scale for farm use, as well as for sale; yet I do not think the practice sufficiently gene-

* It must be admitted, however, that much land of this description still remains unoccupied, though its quantity is annually diminishing. In order to bring it generally into cultivation, the labourer should at first be encouraged, by giving him seed and manure. Whatever is done for the poor man in the way of stimulation to industry, is a real benefit to the public.

ral. For though potatoes are allowed to be an exhausting crop, on some of the Berkshire soils, with good manuring, this effect would be little felt.

On his Majesty's Norfolk Farm, potatoes are raised in considerable quantities as a neutral shift; and some improving farmers adopt the same plan, though in a more limited degree. About Newbury much land is rented by the gardeners for the culture of potatoes; and about Coxwell, in the Vale of White Horse, land is let for this purpose at the rate of 4*l.* per acre, the farmer plowing it for the planter.

Of potatoes there are many varieties, and more care should be paid than is usually done, to the change and kind of seed.* With proper care, and planting the suitable kinds, potatoes may be procured for the table during the whole year. They may be planted, from the middle of February to the end of July, according to the sort, with a fair prospect of a good return. The writer of this has planted early potatoes in January, in the natural ground; and though they have, perhaps, once or twice in the season been nipped by the frost, they have nevertheless recovered, and been fit to take up by the middle of June, by which time the old stock of potatoes is generally spent, or spoiled.

When planted on a large scale, the following mode is used by Mr. Loveden, and other gentlemen, in this county. Being first cut into pieces, each containing an eye or two, women follow the plough, and dropping them at suitable intervals, the sets are covered by the return furrow. In a similar manner they are dug up

* In a general report it is impossible to enter into minutiæ. See an excellent publication on the Culture of Potatoes, by the Board of Agriculture, from which every necessary information may be gleaned.

by

by a plough, and the produce collected by women or children. The Irish method of planting on ridges, would probably be more suitable for some soils, especially when the ground is fresh broken up. The garden mode of culture is, however, most prevalent. In all cases, manure is thought essential; the lighter its texture the better, particularly if the soil is heavy. A loamy sand, unquestionably, is most suitable for potatoes, and of this kind of land, Berkshire furnishes many considerable portions.

SECT. V.—CROPS NOT USUALLY CULTIVATED.

I. CABBAGES.

Cabbages (*brassica oleracea*) are of several distinct species and varieties; but the principal, as applicable to the purpose of the farm, are the turnip cabbage, the turnip-rooted cabbage, the drum-headed cabbage, the Scotch cabbage, Coleworts, the North American cabbage, the Anjou cabbage.

The thousand-headed cabbage has lately been highly recommended as producing a large quantity of food for animals; but it is cultivated only by Mr. Loveden, as far as I know, in this county, who finds it correspond with the character it has received.

On his Majesty's Flemish Farm, cabbages are cultivated on such a scale that, together with *ruta baga*, they annually occupy one quarter. Experience shews their utility; yet they are not commonly introduced on soils where the propriety of planting them is self-evident. They are well adapted for stiff lands, where the turnip

cannot be raised to advantage; and by a judicious choice of the sorts, they may be made to answer the purpose of spring or winter feed, for different kinds of live stock. The mode of culture may be learned from almost any modern system of farming.

II. CARROTS (*daucus carota*).

The Sandwich carrot is the kind most usually cultivated by the farmer; but, except by Mr. Benyon, of Englefield house, and perhaps a few other gentlemen, I do not find that they are planted to any extent in this county; though the deep sandy loams, with which it abounds, indicate the propriety of raising this root, which may be applied to the feeding of cows, horses, and hogs, late in the spring, after turnips are gone, or to the fattening of oxen and sheep, at any season when in perfection. Nor is the crop in itself an unthrifty one: from 200 to 300 bushels have been raised, broad cast, on an acre, and upwards of that quantity when hand drilled. A bushel per diem is reckoned a sufficient allowance for a working horse, instead of oats.

As an encouragement to their introduction, it should likewise be observed, that the tops are acceptable to cows, sheep and swine; and that they have been converted into good hay, by cutting them off with a scythe in the latter end of June, but not so close as to injure the crown of the root. Four tons of hay have been made from an acre. Of course it cannot be dried on the same ground, but must be carried off.

III. HOPS.

Hops (the *humulus lupulus*) used to be cultivated formerly in considerable quantities in Berks, as I have ascertained from old books and records, and now grow naturally in the hedges in many places, a proof that the soil is well adapted for them, though at the present period there are few hop grounds, and those generally in small patches. The largest is at Faringdon, where ten acres have long been devoted to the culture of this plant. A ground of two acres is to be seen at Bisham, said not to be very productive. At Bradfield, and a few other places, hops are still cultivated; and formerly at Hurley they were raised in some quantities.

On a small scale, it cannot answer to cultivate this plant, on account of the necessary expensive establishments to bring the produce to market. Hops would answer, however, extremely well on the rich strong clays of this county, and even on the gravels and loamy chalks in sheltered situations. But I have been informed, that the demand for hops is lessened since quassia, and other drugs, have been substituted in their stead by common brewers. If so, few will be induced to make new plantations, especially as the crop is subject to many casualties, and attended with a considerable certain expence. About Hungerford, the culture of hops has been tried, and given up; and this has been the case in the parish of Remenham, where, till within these few years, a beautiful plantation occupied the bottom of the slope on one side of the London road, leading up Henley hill.

IV. WOAD (*isatis tinctoria*).

This plant, which delights in a deep fat friable loam, used to be cultivated about Wantage; but, though found very productive, it seems is discontinued. It is seldom, indeed, that great farmers will attend to minute crops; but that is no reason why the occupiers, or proprietors, of a few acres of arable land, should not apply them to the most profitable purposes. For such as may be inclined to make the experiment of raising woad, I beg leave to state, that the land should be well tilled in winter, in the spring, in June, and again in July, and perfectly freed from weeds. The seed, which answers better drilled than broad cast, should be sown early in August, and hoed when two or three weeks old, setting the plants out at the distance of six inches at least from each other. Three or four crops or gatherings will be produced in succession, but the last is least valuable. The process of curing and drying it is somewhat tedious, but not very difficult. Woad is much esteemed by dyers, and fetches a good price. Sheep are fond of the plant, and it is said to cure them of the rot.

V. DILL. (*anethum segetum*).

This plant, though not unusual in some of the neighbouring counties, is little noticed in Berkshire. It deserves, however, to be more generally known, as it is well adapted to the thin poor soils, of which this county is not without a portion; and will produce a tolerable crop where vetches, which it somewhat resembles, would scarcely repay the expences of planting.

Dill

Dill makes an acceptable hay for all kinds of cattle; but it is reckoned peculiarly useful to ewes with sucking lambs, increasing both the quantity and the quality of the milk. It is generally sown broad cast, about March, in the quantity of a bushel and a half per acre, and requires little future care till cutting time, which will be in September. If intended only for hay, it is fit for the scythe when in full bloom, and a ton per acre will be obtained from very ordinary land. When it stands for seed, which is the most beneficial mode, the straw is still valuable, and the produce will be from two and a half to three quarters, worth, on an average, about 2*l.* 10*s.* per quarter. The seeds ground, and mixed with barley or potatoes, will fatten hogs.

VI. FLAX (*linum usitatissimum*).

In a county, not ill suited in many places for the culture of flax, and where feeding cattle with its seed, as well as with the husks, after the oil is expressed, called oil cakes, is a prevailing practice, it is rather remarkable that no experiments, as far as I know of, have been made to raise it in any quantity. To this branch of agriculture I therefore would wish to call the attention of my readers; especially as, under existing circumstances, the importation of flax seed will probably be stopt, or the price so far enhanced, that the limited nature of the profits on feeding will no longer allow its use.

On the mode of cultivation it is unnecessary to enter, nor does it fall within my province. Flax, however, is such an important crop, that I hope to be excused for recommending its introduction. I might likewise add hemp, for which the Vale is well adapted.

VII. LAVENDER (*lavandula spica*).

The lavender plantation at Park Place, as an article of commerce, is unique in this county,* and therefore the origin and progress of the establishment connected with it, deserve to be detailed. About twenty-five years ago, it occurred to the late Field Marshal Conway, then proprietor of Park Place, that the large fires used for converting coal into cinders or coke, might be made subservient to some other useful purposes, particularly in distilleries, &c. In consequence of this idea he procured a patent, and erected the present large still-house, with the coke oven, stills, and other appendages, at an expence of nearly 2,000*l*. It stands just within the limits of the park, on the London road, near Henley bridge, and adjoining to it are the lavender plantations.

The original plan extended not only to the distillation of lavender, and other aromatic plants, for the extraction of chemical oil; but also to draw an ardent spirit from potatoes. From the latter it appears a very good spirit was produced; but exclusive of the business of malt distillation being nearly, if not entirely, concentrated in the hands of a few very opulent persons, who monopolize the trade, it is highly probable that an ardent spirit may be obtained from several vegetable substances cheaper than from potatoes.

The spirit distillery was therefore given up, and only the lavender retained; and when the Earl of Malmes-

* On a small scale, some other attempts have been made in Berkshire to cultivate lavender for distillation; but though the chalky soil, in sheltered situations, is congenial to the plant, the expence of conducting the business is too great for small plantations.

bury

bury purchased the estate, his lordship, not approving of the coke business, the oven was taken down, with all the useless buildings, and the still has since been worked by a common furnace.

There are about twenty acres planted with lavender, on the side and at the bottom of a chalky hill with a south-western aspect. The land at the bottom is very good, but that on the slope has only a thin covering of mould over the chalk, and the difference of soil is strongly marked by the luxuriance of the plants they respectively bear.

The lavender is planted in rows, each plant being about four feet apart; and as it decays, from age, or accidental circumstances, it is replaced from a nursery of young plants reared on purpose, by taking slips from such as are wearing out. The lavender begins to get ripe about the end of July, when nearly one hundred women and children are employed in cutting off the ripe heads, which they tie up in bundles, and send to the still-house in baskets, carried by two men. The lower part of the stalks are then cut off, and the heads are put into the still, and distilled. The chemical oil, being separated, is poured into copper jars for sale. The management of this business is under the superintendence of John Cooper, Esq., banker in Henley, a gentleman who was brought up to the profession of a chemist, in London, and who unites a knowledge of general business to a taste for chemical pursuits.

Lavender should be kept very clean; and hence three men are constantly employed in weeding this plantation. They sometimes use a small hand hoe, but not much, as it is apt, without care, to break and injure the plant. In frosty weather, or when they cannot be better employed, they go over the plantation with shears, and

and clip off all the stalks that were left by the lavender cutters.

The price and quantity of the essential oil vary in an extreme degree. It has been sold between 70*s*. and 80*s*. per pound, and has been known to fetch only 18*s*. For some years, the price has been rather low; and on this circumstance, the profit or loss of the establishment must depend, as well as on the crops yielding well. A hot summer commonly increases their productiveness.

CHAP. VIII.

GRASS.

SECT. I.—NATURAL MEADOWS AND PASTURES.

BERKSHIRE being bounded and intersected by rivers, must consequently have a large proportion of meadows; and if to this we add the dairying land in the Vale, and dry pastures and parks producing natural grass, the whole quantity cannot be much less than 100,000 acres, or somewhat more than a fifth of the contents of the county, without including the sheep downs on the Chalk district.

But considerable as the proportion of grass land may appear, before the introduction of artificial grasses, it bore a much higher relative price than it does at present. In the reign of Charles II. a small portion of glebe meadow belonging to the vicarage of Hurley, on the banks of the Thames, yielded nearly the same rent as it does at the present time; and I have heard from Mr. Loveden, and other gentlemen of the county who possess meadow lands, that, except in the vicinity of towns, where, from the number of horses kept, accommodation land will let at any price, the rise of this kind of property has been very trivial, compared with its intrinsic value, and the advance on arable lands.

Thames meadows.—Along the meandering course of the

the Thames, which washes this county for nearly 105 miles, a track of meadow land, of various breadths, accompanies its progress, generally of an excellent quality, and from the fertilizing effects of the water, when accidentally flooded at favorable seasons, rendered still more productive. But it is to be lamented, that the facilities which are presented for artificial watering, are very little attended to on the banks of the Thames, and that by obstructions, or neglect, the floods not unfrequently come in when they are least of all desired, when the grass is far advanced, or when it is nearly ready to be carried. From the natural fall of the river, however, this danger and loss might often be obviated by an improved navigation; while all the advantages of irrigation might be secured at a moderate expence. The quantity of water meadow, however, on the Thames is inconceivably small.* The herbage of the Thames meadows is of a superior quality in most places, as the river deposits a fructifying slime, which quickens vegetation, and is friendly to the growth of the best kinds of natural grasses. In some situations, however, I have noticed a great inattention to the eradication of noxious weeds, and likewise to draining; and indeed it must be confessed, that nature, rather than art, has rendered the Thames meadows so valuable as they in reality are.

Many insuperable difficulties to improvement undoubtedly arise from common meadows, which, like common field arable land, are the bane of agriculture, and reduce the spirited and well informed cultivator to the same state of apathy and indifference, as the drone who follows the practice of his forefathers, and leaves

* See Chap. XII.

the

the rest to chance. Till all the lands in the kingdom, capable of cultivation, are thrown into severalty, whether inclosed or not, it will be vain to expect systematic and general improvements. Where meadows are common, perhaps from Michaelmas to Lady-day, and in some cases they are common after they are once mowed, what individual interest can be felt, or what individual expence will be incurred!

Kennet meadows.—From the peaty soil, and the water when it overflows being impregnated with that substance, the line of meadows along the Kennet, naturally produces a coarser grass, and consequently the land is less valuable. An acre of land on the Thames meadows near Reading, is worth 20*s.* more than that washed by the Kennet. The defects of nature, however, are in some measure helped by art; and where the state of the property will allow, irrigation has in several places been adopted; and from the more perfect state of the Kennet navigation, floods are less frequent. The most valuable and extensive meadow, however, in this track (Theale meadow) is subject to the right of commonage.

Lambourn meadows.—This river runs but a short way, after leaving the downs, before it falls into the Kennet; but from the chalky slime it deposits on the adjoining meadows during occasional floods, the herbage is sweet and good.

Loddon meadows.—The meadows on the line of this river produce an herbage nearly similar to those on the Kennet; and the same may be said of the meadows along its tributary stream, the Broadwater. Running through a heathy and peaty soil, should these streams overflow their banks when the grass is growing, it receives

ceives essential injury from the slime, and is sometimes totally spoiled.

It is unnecessary to particularize the portions of meadow land lying on the banks of the smaller streams. Some few of them are artificially irrigated, and the herbage is fine or coarse, according to the nature of the soil; and the pains taken to drain, and to eradicate the larger aquatic plants, which not only occupy much space, but render the hay, or aftermath, less nutritious.

The meadows in severalty, and sufficiently high above the floods, are sometimes manured with rotten dung, or compost; but the practice is not general. The more elevated meadow lands are likewise occasionally top dressed with ashes, either peat or coal; and about Wantage, tan is used for the same purpose, with the best results. About Faringdon, and some other places, a top dressing is applied to the meadows once in three or four years. A moderate quantity, and frequently applied, is better than too much at once, which is apt to injure the herbage for the first season, except when peat ashes are used, which are rarely spread too abundantly. Mr. Justice, of Sutton Courtney, informed me, that they found the ashes of bean stubbs a capital dressing for meadow lands, and that this was observed to bring the Dutch clover.

Upland pastures.—In the western extremity of the county, where the dairying farms chiefly lie, the natural grass lands are commonly well managed, and receive every assistance from manuring. Pot, or yard dung, is plentifully spread over the land soon after cutting the hay that has been hained. It is not found that it renders the latter feed unpleasant to cattle; but on the contrary, it increases the quantity, and is beneficial

ficial to the future mown crop. Under the White Horse hills, the white soil deposited in the ditches, and which has been washed down from the chalky slopes, is found an excellent top dressing for natural meadows and pastures.

The pastures in general, however, are not entitled to any extraordinary commendation for their good management, except in parks and ornamental grounds. In many places, I observed ant-hills thickly overspreading the surface, and a common inattention to drainage; particularly in home closes, where the poaching of animals, as well as the nature of the soil, render this more indispensably necessary.

The more upland pastures are sometimes managed on a principle radically wrong. The desire of obtaining a few crops of corn, induces the farmer, when he is not restrained by his lease, to break up his grass land, and when it is exhausted, he wishes to lay it down again permanently for pasture. For this purpose he sows rye grass, and other seeds; but a short time convinces him that the plant is not only unprofitable in itself, but will not stand more than a very few years, and that weeds of every kind fill the ground. He must, therefore, make it what is called convertible land, however anxious he may be to bring it to a good turf. I speak of a practice not common with sensible and honest cultivators, but which deserves to be marked with censure, till it is wholly exploded.

When it is intended to lay down to grass, land that has once been in tillage, unless the soil is extremely favorable, the utmost attention should be paid to the kind of seed employed. Down land, indeed, once broken up, can seldom or ever be brought to its former state; but if it is wished to make a pasture on a suitable

able soil, the following mixture of seeds, recommended by that late ingenious and discriminating botanist Mr. Curtis, will probably answer.

This gentleman pointed out the end of August, or the beginning of September, as the most proper season for sowing grass seeds, and that they should be put in broad cast, using of meadow fox-tail one pint, of meadow fescue ditto, smooth-stalked meadow half a pint, crested dog's-tail a quarter of a pint, sweet scented vernal ditto, Dutch clover half a pint, wild red clover, or in its stead the broad clover of the shops, ditto. If the soil is wet, the crested dog's-tail, and the smooth-stalked meadow, especially the former, may be omitted.

This composition, which may be purchased of Gibbs and Co. seedsmen and nurserymen to the Board of Agriculture, Piccadilly, London, sown in the proportion of about three bushels to an acre, under favorable circumstances, will form in two years a most excellent meadow, the land being previously cleared of all other plants.

In this, indeed, as in every other process, nature is to be followed. When land is to be permanently laid down, attention should be paid to what plants the pastures in the vicinity supply; the best of them should be selected, and their seeds sown accordingly. To each soil and situation something is peculiarly adapted; and it is by observing the bent of nature alone, and correcting its defects, that success can be expected.

For the following list of indigenous plants, the most ample, by far, that ever has been exhibited of this county, I am, in a great measure, indebted to the botanical researches and skill of Dr. Noelheden, of Windsor, and Mr. Bicheno, of Newbury. The contributions of the former I owe to the kind attentions of the Rev. Mr. Townshend,

Townshend, of Bray, to promote the object of my enquiries; and I have only to regret, that the Doctor having kept no written memoranda, and having made his excursions some years back, was unable to name the exact habitats of the plants he discovered. The district he examined, however, includes the vicinity of Windsor, and extends on one side as far as Bagshot Heath, and on the other to Bisham Woods.* The private friendship of Mr. Bicheno inclined him to give me every assistance in his power in a favorite pursuit: Had he enjoyed more leisure, his discoveries would have been more extensive. But at this advanced period of botanical science, it is no small fame to have been able to add one plant to the British Flora.

The plants, or weeds as the farmers would call them, which are most common, and most injurious in corn and grass lands, will be more particularly noticed under *Weeding*, Chap. XII.

Acer campestre. Common maple. This tree is frequently seen in the hedges and thickets. The wood is much used for turning in the lathe; and vessels made of it may be turned so thin as to transmit the light. A tree.

Achillea millefolium. Millfoil yarrow. N. Very common. The flowers yield an essential oil. Sheep

* To the plants communicated by Dr. Nocheden I have put the letter N. and to those by Mr. Bicheno the letter B. or both letters when their lists were the same. And in order to do justice to other gentlemen who have already published their botanical discoveries in this county, I have given their names at length. The catalogue, I am very sensible, is by no means complete; and the nature of my engagements would not allow me materially to increase it. In arranging, and adding brief accounts of qualities, &c when I thought such would be useful or entertaining, I have had considerable trouble.

and swine eat this plant; but other animals are not fond of it. Perennial.

Adonis autumnalis. Autumnal pheasant's eye. B. In the corn fields about Yattendon. Its beautiful red flowers have gained it admittance into the garden. Annual.

Adoxa moschatellina. Tuberous moschatel. B. Damp woods and shady places. Perennial.

Ægopodium podagraria. Herb gerard, or goat weed. N. The leaves may be eaten early in the spring with other pot herbs. Cows, sheep, and goats, do not dislike it, but horses do. Perennial.

Æthusa cynapium. Fools' parsley. Common in corn fields and gardens. If eaten for parsley, which it resembles, it occasions sickness. The curled parsley, therefore, should be cultivated. It is noxious to geese; other animals eat it. Annual.

Agrimonia eupatoria. Agrimony. N. Common. If gathered when in blossom, it makes the basis of an excellent herb tea, and the root is useful in fevers and jaundice. Cows, horses, and swine, dislike it; sheep and goats eat it. Perennial.

Agrostemma githago. Corn cockle. Too common. Annual.

Agrostis spica venti. Silky bent grass. N. Sandy fields among corn, common. Horses eat it; sheep refuse it. Annual.

——— *vulgaris.* Common bent. N. On poor dry sandy land. Disliked by cattle, as all the bents are. Perennial.

Aira cæspitosa. Turfy hair grass. N. Moist meadows and woods. Its leaves are extremely coarse, and little relished by cattle. It is injurious in meadows,

dows, and can only be extirpated by draining, paring, and burning. Perennial.

Aira fleuxosa. Heath hair grass. N. Heaths, woods, and barren pastures. Perennial.

——— *præcox.* Early hair grass. N. Dry commons. Flowers in May. Perennial.

Alchemilla vulgaris. Bear'sfoot. N. Frequent in meadows and pastures. The whole plant is astringent; and it has been found injurious, if not fatal, to cows, where it is abundant; horses, sheep, and goats, eat it.

Alisma damasonium. Star-headed thrumwort. On Winkfield plain. Dr. Goodenough. Ditches about Southcote, near Reading. Mr. Fardon. Perennial.

——— *plantago.* Water plantain. N. Perennial.

——— *ranunculoides.* Lesser thrum wort. B. Peren.

Allium schœnoprasum. Chived garlic. N. Meadows and pastures. Perennial.

——— *vineale.* Crow garlic. N. The young shoots may be eaten in salads, or boiled as a pot-herb. Meadows and pastures. Perennial.

Alopecurus agrestis. Fox-tail grass. N. Corn fields and road sides. Very troublesome among wheat. Perennial.

——— *geniculatus.* Jointed fox-tail grass. N. Not uncommon in wet meadows. Perennial.

——— *pratensis.* Fox-tail grass. Common in the best meadows, of which it forms part of the herbage. It deserves to be cultivated. Dr. Pultney says it is the most grateful of all grasses to cattle. Perennial.

Alsine media. Common chickweed. By modern botanists referred to the genus *stellaria.* Very com-

mon in all kinds of situations, and much varying in its size and appearance. A troublesome weed, but not unacceptable to animals, particularly to small birds and chickens. Annual.

Anagallis arvensis. Pimpernel. Very common in corn fields and sandy places. It is a good barometer, as its scarlet petals close before approaching rain. A variety with blue blossoms is sometimes seen. Annual.

——— *tenella.* Bog pimpernel. N. B. Perennial.

Anemone nemorosa. Wood anemone. N. Not uncommon in woods. The flowers fold up curiously against rain. It is unacceptable to most kinds of animals, and has been known to occasion the bloody flux in sheep. Perennial.

——— *pulsatilla.* Pasque flower. B. On Ilsley downs. A beautiful and scarce plant. Perennial.

Anethum fœniculum. Common fennel. N. The use of this plant is well known. Its seeds abound in an essential oil, which is useful in medicine. Biennial.

Angelica sylvestris. Wild angelica. N. Marshy woods and hedges. It possesses the same qualities as the cultivated species, though in an inferior degree. Perennial.

Anthemis cotula. Stinking camomile. N. This plant seems to be disagreeable to every animal, except the toad. The smell is intolerable. Annual.

——— *nobilis.* Common camomile. N. One of the most valuable of our indigenous plants as a medicine. Perennial.

Anthoxanthum odoratum. Sweet scented vernal grass. Common in meadows and pastures, and one of our earliest grasses. It communicates to new-mown

mown hay that delightful smell for which it is distinguished. Perennial.

Anthylis vulneraria. Kidney vetch. N. B. On a chalky or a calcareous soil. Sheep are very fond of it. It dyes yellow. Perennial.

Antirrhinum cymbalaria. Ivy-leaved snap-dragon. N. B. On the ruins at Park-place, &c. Perennial.

——— *elatine.* Fluellin, or snap-dragon. B. On the Wash, common near Newbury. Annual.

——— *linaria.* Toad flax. Barren meadows and pastures, and road sides. Common. Perennial.

——— *majus.* Greater snap-dragon. B. On the ruins of Reading Abbey. Also a white variety. Perennial.

——— *minus.* Least snap-dragon. Corn fields near Eton. Mr. Gotobed. Annual.

——— *monspessulanum.* Sweet smelling snap-dragon. This scarce plant grows pretty plentifully on Henley Hill, in the parish of Remenham. Perennial.

Aquilegia vulgaris. Columbines. N. B. Woods and thickets about West Woodhay. Introduced into the garden on account of its beauty. Peren.

Arabis thaliana. Turkey pod. N. Walls and dry sandy pastures. Annual.

Arctium lappa. Burdock. Road sides and rubbish. The stems, stripped of their rind, and boiled, before their leaves appear, eat like asparagus. Animals are not fond of it, though cows will eat it. Biennial.

Arenaria rubra. Purple spurry, or sand-wort. N. Sandy meadows and corn fields. Annual.

——— *trinervia.* Plantain leaved sandwort. N. Woods and wet hedges. Annual.

Aristolochia

Aristolochia clematitis. Birthwort. N. Woods and hedges. Perennial.

Artemisia absynthium. Wormwood. Plentifully in several places. The leaves and flowers very bitter, and sometimes used instead of hops. Cattle dislike it. In medicine useful. Perennial.

Arum maculatum. Cuckoopint. N. Shady places and ditch banks. Useful in medicine, and as a cosmetic. Starch may be made from the roots. Perennial.

Arundo phragmites. Common reed. N. Rivers, lakes, and ditches. The reeds are much more durable than straw for thatching, and are useful for screens. Perennial.

Asarum Europæum. Asarabacca. A scarce plant. Between Maidenhead and Henley. Dr. Abbot. The powder of the leaves forms the basis of cephalic snuff. Perennial.

Asperula cynanchica. Squinancy woodruff. N. B. On Ilsley downs, &c. Perennial.

——— *odorata.* Sweet woodruff. N. Cows, horses, and sheep eat it. The aromatic flowers infused in water excel in flavor the finest teas. Perennial.

Astragalus glycyphyllos. Wild liquorice. By the road side between Twyford and Reading. Mr. Forster, Jun. Perennial.

Atropa belladonna. Deadly nightshade. B. Very luxuriant, and plentiful about the ruins at Hampstead Marshall. In Ilsley church-yard. Every part of the plant poisonous. Perennial.

Avena elatior. Tall oat grass. N. Wet and damp places. A troublesome weed in arable lands. Unpalatable to cattle, especially to horses. Perennial.

Avena

Avena fatua. Bearded wild oats. Common in fields about Windsor. Mr. Gotobed. Horses and sheep will eat it. Chokes barley where common. Annual.

——— *flavescens.* Yellow oat. N. Meadows, pastures, and hills. Reckoned the best of the genus for the use of the farmers. Perennial.

——— *pubescens.* Rough oat. N. Pig's Green Lane, near Reading. Mr. Fardon. Meadows about Windsor, common. Mr. Gotobed. Perennial.

Ballota nigra. Stinking horehound. N. On rubbish and in hedges, common. The Swedes reckon it an universal remedy in diseases of cattle. Horses, cows, and sheep refuse it. Perennial.

Berberis vulgaris. Barberry. Woods and hedges, not uncommon. Farmers and gardeners consider it as a cause of blight. Useful as a dye, &c. Shrubby.

Betonica officinalis. Betony. Woods and shady groves, common. Is often smoked as tobacco, and was once used in medicine. Sheep eat it. Perennial.

Betula alba. Birch tree. Not unfrequent, as it grows in all kinds of soils. The wood is firm, tough, and white, and is convertible to various useful purposes. A pleasant wine may be made from the sap. A tree.

——— *alnus.* Alder. Loves a low and marshy situation, and is sometimes planted to make hedges. It will grow from seeds, slips, or cuttings. The wood will endure a long time under water. The bark is used in dyeing. A tree.

Borago officinalis. Borage. N. Walls and among rubbish. The juice affords a true nitre. The tops

tops form an ingredient in cool tankards. Perennial.

Brassica napus. Rape. N. On ditch banks and among corn. The cultivated variety extremely valuable in husbandry. See *Rape.* Biennial.

——— *oleracea.* Sea colewort. N. The different varieties of cultivated garden cabbages originate from this. I regret that I cannot indicate its habitat in Berkshire, as it is usually found on the sea coast only. Biennial.

Briza media. Middle quake grass. N. An indifferent kind of pasture grass. Perennial.

Bromus mollis. Soft brome grass. Little esteemed as a grass, and noxious in corn fields. Annual.

——— *sterilis.* Barren brome grass. N. Woods and hedges, frequent. Annual.

——— *sylvaticus.* Hairy-stalked brome grass. N. Woods and hedges, frequent. Annual.

Bryonia dioica. Bryony. N. Hedges and thickets. Useful in medicine. Refused by cattle. Peren.

Bunium flexuosum. Lesser pig nut. N. The roots boiled or roasted little inferior to chesnuts. Perennial.

Bupleurum rotundifolium. Thoroughwax. B. Annual.

Butomus umbellatus. Flowering rush. N. B. In the peat pits near Newbury, &c. A beautiful, and in many counties a rare plant. Perennial.

Buxus sempervirens. Box. B. Near Wallingford. The wood, hard, smooth, and converted to many useful purposes. A tree, or shrub.

Calitriche, verna, and autumnalis. Vernal, and autumnal star grass. N. Ditches, ponds, and slow streams, which they sometimes mat over so as to render them passable. Annual.

Caltha

Caltha palustris. Marsh marygold. Too common in moist meadows, from which they should be eradicated. The unexpanded flowers preserved in salted vinegar a good substitute for capers. Perennial.

Campanula glomerata. Clustered bell-flower. N. B. On all the downs bordering on the Vale of the White Horse. Perennial.

——— *hybrida.* Lesser Venus looking glass. B. Corn fields near Newbury. Annual.

——— *rapunculus.* Rampion bell-flower. B. On Pill Hill, near Newbury. The roots are eaten raw, or boiled. Biennial.

——— *rotundifolia.* Round-leaved bell-flower. N. Perennial.

——— *trachelium.* Canterbury bells. N. Admitted into our gardens. Perennial.

Cardamine amara. Bitter cresses, or ladies' smock. B. Chamber-house coppice, near Newbury. Banks of the Thames near Windsor, rare. Mr. Gotobed. Sheep eat it. Perennial.

——— *pratensis.* Common ladies' smock. N. Useful in epilepsies, &c. Perennial.

Carduus acaulis. Dwarf thistle. N. B. On Ilsley and other downs. Perennial.

——— *eriophorus.* Woolly-headed thistle. B. About Wantage. Biennial.

——— *lanceolatus.* Spear thistle. B. Biennial.

——— *marianus.* Milk thistle. N. When young may be eaten. Annual.

——— *nutans.* Musk thistle. N. Annual.

——— *palustris.* Marsh thistle. N. Perennial.

——— *pratensis.* Meadow thistle. N. B. All thistles ought to be eradicated. Perennial.

Carex. This genus has been ably illustrated by Dr.

Goodenough, now bishop of Carlisle. Dr. Noeheden has furnished me with an ample list found within his botanizing district, as under:

Carex dioica. Small seg, scarce.—*Acuta.* Slender spiked seg.

——— *ampullacea.** Beaked seg.—*Arenaria.* Sea seg.—*Axillaris.* Axillary seg.

——— *binervis—cæspitosa, curta.*† White seg.—*Distans.* Loose seg.

——— *flava.* Yellow seg.—*Hirta.* Hairy seg. *Intermedia.*

——— *lævigata.* Bog in Windsor Great Park. Mr. Gotobed.—*Muricata.* Spiked seg.

——— *palescens.* Pale seg.—*Panicea.* Pinky seg.

——— *paniculata.* Panicled seg.—*Pendula.* Pendulous seg.

——— *pilulifera.* Pill bearing seg.—*Præcox.*

——— *pseudo cyperus.* Bastard seg. Ditches near Eton. Mr. Gotobed.

——— *pulicaris.* Flea seg.—*Recurva.* Heath seg.

——— *remota.* Remote seg.—*Riparia.* Great seg.

——— *stellulata—stricta—sylvatica.* Wood seg.

——— *vesicaria.* Bladder seg.—*Vulpina.* Great seg. All perennial.

Carlina vulgaris. Wild carline thistle. N. The flowers expand in dry, and close in moist weather, long after the plant is taken up. Biennial.

Carpinus, betulus. Common horn-beam tree. N. Sometimes grows to a great size. The wood is white, tough, and applicable to many useful purposes. Cattle eat the leaves; but grass will not grow under its shade.

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* At Virginia Water, Dr. Goodenough. † Ditto, Ditto.

Caucalis

Caucalis anthriscus. Hedge parsley. N. Horses very fond of it. Biennial.

——— *daucoides.* Fine leaved bastard parsley. Near Reading. Mr. Fardon. Annual.

Centaurea cyanus. Blue bottle. Cornfields. Flowers dye blue. Annual.

——— *nigra.* Black knap weed. N. Meadows and pastures. Perennial.

Centunculus minimus. Bastard pempernel. B. On Bagshot Heath. Annual.

Cerastium arvense. Corn mouse ear. Pretty common. Perennial.

——— *viscosum.* Narrow leaved mouse ear. N. Per.

——— *vulgatum.* Clammy mouse ear. Meadows, pastures, &c. Annual.

Chærophyllum sylvestre. Wild cicely. Roots poisonous. Cows fond of it. Its presence indicates a rich soil. Perennial.

——— *temulum.* Wild chervil. In hedges common. Annual.

Chelidonium majus. Common celandine. N. Juice very acrid. Annual.

Chenopodium bonus henricus. N. Mercury goosefoot; esculent. Perennial.

——— *rubrum.* Red goosefoot. N. Dunghills and rubbish. Annual.

——— *viride.* Green goosefoot. Common in kitchen gardens. Annual.

Chironia centaurium. Lesser centaury. B. A white variety in Shaw woods. It forms the basis of the famous Portland powder for the gout. Animals in general are not fond of it. Annual.

Chlora perfoliata. Perforated yellow wort. N. Near Reading, Mr. Fardon. Annual.

Crysan-

Chrysanthemum inodorum. Camomile goldins. N. Annual.

——— *leucanthemum.* Moon flower. Meadows, pastures, common. Perennial.

——— *segetum.* Corn marigold. A troublesome weed in corn fields. Annual.

Cichorium intybus. Cichory or endive. N. Not uncommon. Perennial.

Cineraria integrifolia. Mountain fleawort. Hill above Streatley; Rev. Mr. Scholfield. Perennial.

Circæa lutetiana. Inchanter's night shade. N. B. Woods. Perennial.

Cistus helianthemum. Dwarf cistus. N. On a calcareous soil. Perennial.

Clematis vitalba. Honesty. N. Hedges, &c. Shrubby.

Clinpodium vulgare. Wild basil. N. Pastures, hedges. Perennial.

Cochlearia armoracia. N. Horse radish. N. A well known condiment for various kinds of food; and an excellent cosmetic. Perennial.

Colchicum autumnale. Meadow saffron. B. About Longford, in the western corner of Berks. Useful in medicine. Perennial.

Conium maculatum. Common hemlock. N. Poisonous, but useful. Biennial.

Convallaria majalis, Lily of the valley. B. In the coppice below Greenham chapel. Flowers highly fragrant and medicinal. Perennial.

——— *multiflora.* Solomon's seal. B. Plentiful in the moist woods near Newbury. Perennial.

Convolvulus arvengis. Small bind weed. Corn fields and road sides. Perennial.

——— *sepium.* Great bind weed. Moist hedges. Medicinal. Perennial.

Conyza

Conyza squarrosa. Ploughman's spikenard. N. B. Near Abingdon. Nauseous smell. Biennial.

Corylus avellana. Hazle-nut tree. Woods and hedges, common. Applied to many useful purposes. Commonly cut down at stated intervals. Never very large.

Cotyledon umbilicus. Navel wort. Stone walls about Abingdon. B. Perennial.

Cratægus oxyacantha. Hawthorn. The most common, and the best fence. Stands the severest winters. Wood tough, and formed into handles for tools, &c.

Cucubalus behen. Spatling poppy. Corn fields and pastures, common. Leaves boiled have the flavour of peas, and are sometimes eaten. Perennial.

Cuscuta Europæa. Dodder. A parasitical plant. On the west side of Bulmarsh heath. Mr. Rudge. Hedges about Clewer. Mr. Gotobed. Near Abingdon. B. Annual.

——— *epithemum.* Lesser dodder. B. Corn fields and heaths, not uncommon. Annual.

Cynoglossum officinale. Great hound's tongue. N. Disliked by animals. Perennial.

Dactylis glomerata. Rough cochsfoot grass. Not ill adapted for sheep-walks, but unsuitable for meadows. Perennial.

Daphne laureola. Wood laurel. B. In Love-lane, near Newbury, and at Welford. A powerful medicine, properly prescribed. Shrubby.

——— *mezereum.* Mezereon. Hinksey woods, near Oxford. Dr. Williams.

Datura stramonium. Common thorn apple. N. Among rubbish, &c. Annual.

Daucus

Daucus carota. Common wild carrot. N. Seeds useful in calculous cases. The cultivated variety a grateful and nutritious food for cattle. Bien.

Dianthus deltoides. Deptford pink. B. On old walls, &c. Perennial.

Digitalis purpurea. Fox glove. N. B. Very luxuriant near Newbury, but rarely or never found in the Vale of White Horse. A powerful medicine. Biennial.

Dipsacus pilosus. Small teasel. N. Hedges and damp places. Biennial.

——— *sylvestris.* Wild teasel. N. Wet hedge banks. Biennial.

Draba verna. Nail wort. Walls and dry places, common. Annual.

Drosera anglica. Great sundew. N. A curious bog plant. Perennial.

——— *longifolia.* Long leaved sundew. B. Same habitat. Perennial.

——— *rotundifolia.* Round leaved sundew. N. B. Mossy bogs. The whole genus is acrid, and supposed to occasion the rot in sheep, but probably without any just reason. Perennial.

Echium vulgare. Viper's grass. On a calcareous soil, common. Biennial.

Elymus europæus. Wood lyme grass. B. Perennial.

Epilobium augustifolium. Rosebay willow herb. N. Woods and hedges. Perennial.

——— *hirsutum.* Codlins and cream. N. Eaten by most animals. Perennial.

——— *montanum.* Smooth leaved willow herb. N. Perennial.

Erica cinerea. Fine leaved heath. M. Pretty common. Shrubby.

Erica

Erica tetralix. Cross leaved heath. N. Moist heaths. Perennial.

——— *vulgaris.* Common heath. Round Newbury and the Forest common. Shrubby.

Ervum hirsutum. Wild tare. N. Sandy corn fields, &c. Animals like it. Annual.

——— *tetraspermum.* Smooth podded tare. N. Hedges, &c. Annual.

Erysimum alliaria. Saucealone. N. Useful as a salad. Perennial.

——— *barbarea.* Winter rocket. N. Walls, &c. Perennial.

——— *cheiranthoides.* Treacle wormseed. Corn fields and road sides about Clewer and Eton. Seeds vermifuge. Annual.

——— *officinale.* Hedge mustard. N. Esculent and medicinal. Annual.

Eupatorium cannabinum. Hemp agrimony. N. Banks of rivers, &c. Perennial.

Euphorbia amygdaloides. Wood spurge. N. Woods and hedges. Caustic. Perennial.

——— *lathyris.* A rare plant. Certainly wild, and perhaps indigenous in several places in and near the parish of Ufton, springing up in dry stony thickets periodically, for a year or two, after they have been cut. Rev. Dr. Beeke.

Euphrasia odontites. Red eye bright, not uncommon. Annual.

——— *officinalis.* Common eye bright, pretty common. Formerly in repute as a remedy for impaired vision. Annual.

Fagus sylvatica. Beech tree. Forms many large woods in this county. Delights in a calcareous soil. No verdure will grow under its shade. The wood

wood is brittle, but convertible to many useful purposes. Soon decays in the air, but endures under water. Sheep eat the leaves. The nuts will fatten swine.

Festuca duriuscula. Hard fescue. N. Dry pastures and meadows. Springs early, is very productive, and grateful to cattle. Perennial.

——— *fluitans.* Flote fescue. N. Wet ditches and ponds. May be cultivated on dry ground. Seeds sweet and nourishing. Perennial.

——— *ovina.* Sheep fescue. N. Dry sandy soils. Very grateful to sheep. Perennial.

——— *rubra.* Purple fescue. N. High heaths and sterile pastures. Perennial.

Filago arvensis. Field cudweed. N. Moist situations. Perennial.

——— *germanica.* Common cudweed. N. Barren pastures. Annual.

Fragaria sterilis. Barren strawberry. Pastures, heaths, and banks. Perennial.

——— *vesca.* Strawberry. N. Hedge banks, common. The parent of the cultivated kinds. Fruit delicious. Perennial.

Fraxinus excelsior. Ash. Woods and hedge rows, but flourishes most in groves and plantations. Bears transplanting and lopping. Leaves not ungrateful to animals. Wood much used in agricultural implements, &c.

Fritillaria meleagris. Fritillary. Meadows about Burghfield bridge near Reading. Mr. Fardon. A white variety. Mr. Deane, of Reading. Perennial.

Fumaria officinalis. Common fumitory. Gardens, corn fields. Juice medicinal. An infusion of the

the leaves a cosmetic. Cows and sheep eat it. Annual.

Galanthus nivalis. Snow drop. B. About Enborne plentiful; but probably an outcast originally from the gardens. Perennial.

Galeobdolon luteum. Yellow dead nettle. N. Woods, moist hedges. Perennial.

Galeopsis tetrahit. Nettle hemp allheal. N. Hedge, banks, &c. Annual.

Galium aparine. Clivers. Common in hedges. Medicinal. Annual.

——— *cruciatum.* Crosswort, mugwort. N. B. Hedges Chapel row. Perennial.

——— *erectum.* Upright goose grass. N. Meadows and wet pastures. Perennial.

——— *mollugo.* Wild madder goose grass. N. Hedges, &c. Frequent. Perennial.

——— *palustre.* White ladies' bed straw. N. Banks of rivulets. Perennial.

——— *procumbens.* Trailing goose grass. N. Dry hills and heaths. Perennial.

——— *uliginosum.* Marsh goose grass. N. Meadows and wet heaths. Perennial.

——— *verum.* Yellow ladies' bed straw. N. Sides of fields and roads. The flowers will coagulate milk. Medicinal. Used as a dye. Annual.

Genista anglica. Needle furze. N. Moist spongy ground. Shrubby.

——— *tinctoria.* Dyer's weed. N. Pastures and borders of corn fields. Most animals eat it. A yellow colour may be extracted from the flowers. Shrubby.

Gentiana campestris. Field gentian. B. On Ilsley downs. Annual.

Gentiana pneumonanthe. Marsh gentian. On Sulhampstead common. Dr. Beeke. Perennial.

Geranium dissectum. Jagged crane's bill. N. Road sides, &c. Annual.

——— *lucidum.* Shinging crane's bill. B. Walls about Abingdon. Annual.

——— *molle.* Soft crane's bill. N. Dry banks, &c. in a sandy soil. Annual.

——— *moschatum.* Musked crane's bill. N. Dry pastures. Annual.

——— *pratense.* Crowfoot crane's bill. N. Moist meadows. Perennial.

——— *Robertianum.* Herb Robert. N. Walls, hedges, &c. Annual.

Geum rivale. Water avens. B. Frequent on the banks of streams near Newbury. The root is medicinal. Perennial.

——— *urbanum.* Common avens or Bennet. N. Per.

Glecoma hederacea. Ground ivy. Woods and shady places common. The leaves thrown into the vat with ale, clarifies it. The whole plant is medicinal. Not much relished by sheep: refused by other animals. Perennial.

Hedera helix. Ivy. Woods, hedges, and old buildings, which it clasps with its tendrils. No animals, except sheep, are fond of it. Its green leaves enliven the brumal scene. Shrubby.

Hedysarum onobrychis. Common saintfoin. N. When cultivated, this plant is particularly advantageous in hilly situations and chalky soils, as an excellent feed for cattle. Perennial.

Heracleum sphondylium. Cow parsnip. N. Hedges, pastures, &c. Animals in general fond of it. A beverage may be extracted from it. Biennial.

Hieracium pilosella. Mouse ear hawkweed. N. Dry situations.

situations. Esteemed hurtful to sheep. Cows and horses refuse it. Perennial.

——— *subaudum*. Shrubby hawkweed. N. Woods and hedges. Perennial.

Hippocrepis comosa. Tufted horse-shoe vetch. N. On a calcareous soil. Perennial.

Holcus lanatus. Meadow soft grass. Common in meadows and pastures. Rather late, but abundant. Soft and spongy, and not very grateful to cattle. Perennial.

Holcus mollis. Creeping soft grass. Corn fields, hedges, &c. Perennial.

Hordeum pratense. Meadow barley. Moist pastures. Produces a considerable quantity of hay, but is inferior to many other grasses. Perennial.

Hottonia palustris. Water violet. N. B. Hemp hole, near Newbury. Perennial.

Humulus lupulus. Hop. In hedges frequent. Some cultivated. Uses well known. Strong cloth may be made from the stalks. Perennial.

Hyacinthus nonscriptus. Harebell hyacinth. Woods, hedges. Perennial.

Hydrocotyle vulgaris. Penny wort. B. Perennial.

——— *inundata*. Bog penny wort. B. Bogs on Greenham common. Perennial.

Hyoscyamus niger. Common henbane. N. Road sides, &c. Poisonous. Biennial.

Hypericum androsæmum. Tutsan. N. About Crookham. B. Biennial.

——— *elodes*. Marsh St. John's wort. N. B. Bogs near Newbury. Perennial.

——— *hirsutum*. Hairy St. John's wort. N. Thickets, &c. Perennial.

——— *humifusum*. Trailing St. John's wort. B. Pastures, heaths. Perennial.

Hypericum montanum. Mountain St. John's wort. N. High situations. Perennial.

——— *perforatum.* Common St. John's wort. N. Supposed medicinal. Perennial.

——— *pulchrum.* Upright St. John's wort. N. In sunny situations. Perennial.

Iasione montana. Scabious sheeps bit. N. Dry parched situations. Annual.

Iberis amara. Candy tuft. B. About Wallingford. Dr. Smith. Annual.

Inula dysenterica. Middle elecampane. N. Watery places and ditchy banks. Useful in the bloody flux, whence its name. Not relished by animals. Perennial.

Juncus bufonius. Toad rush. N. Sandy and watery places. Perennial.

——— *campestris.* Field rush. N. Frequent on heaths, pastures. Perennial.

——— *articulatus.* Jointed rush. N. Meadows, wet woods, &c. Perennial.

——— *conglomeratus.* Round headed rush. N. Moist meadows, &c. Used as wicks for watch lights, and the pith in toys. Perennial.

——— *effusus.* Common rush, or soft rush. Very common. Applied to the same purposes as the preceding species. Perennial.

——— *Forsteri.* Forster's rush. In the woods of Hall-place, Hurley. Mr. W. F. Drake. Peren.

——— *maximus.* Wood rush. N. Woods and hedges; three or four feet high. Perennial.

——— *squarrosus.* Moss rush. N. Turfy bogs on heaths. Perennial.

Lamium album. White dead nettle. Very common. Per.

——— *purpureum.* Red dead nettle. Rubbish, &c., frequent. Annual.

Lapsana

Lapsana communis. Common nipple wort. N. Hedges, &c. Esculent. Annual.

Lathyrus palustris. Chickling vetch. A wood near Abingdon. Blackstone. Perennial.

——— *pratensis.* Tare everlasting. N. Sometimes cultivated, but not found very productive or grateful to cattle. Perennial.

Lemna minor. Least duck meat. Ditches and ponds abundant. Annual.

Lemna polyrhiza. Greater duck meat. Ditches. Ann.

Leontodon autumnale. Autumnal dandelion. N. Meadows, &c. Perennial.

——— *officinale.* Common dandelion. Early in the spring may be used as a salad. Medicinal. Animals not fond of it. A troublesome weed. Perennial.

——— *palustre.* Marsh dandelion. Bog in Windsor Great Park; rare. Mr. Gotobed.

——— *taraxacum.* N. Probably allied to the *palustre.* Perennial.

Lepidium latifolium. Common dittander. B. Peat pits about Newbury. Perennial.

Leucojum æstivum. Summer snow-drop. B. Not uncommon on the islands and banks of the Thames near the efflux of the Loddon. Perennial.

Ligustrum vulgare. Privet. B. Hedges, common. Berries furnish a dye. May be propagated by cuttings. Shrubby.

Lithospermum arvense. Corn gromwell. N. Frequent. Annual.

——— *officinale.* Common gromwell. N. Dry gravelly soils. Perennial.

Lolium perenne. Rye grass. Frequently sown with clover. Comes early. Not very nutritious as hay. Pacey's variety best. Perennial.

Lonicera

Lonicera periclymenum. Honey-suckle, woodbine. Hedges, common. An ornament to the gardens and woods. Not ungrateful to sheep and cows. Shrubby.

Lotus corniculatus. Bird's foot clover. Frequent. In Hertfordshire cultivated as a pasturage for sheep. Not unproductive. Perennial.

Lychnis deoica. Red-flowered wild campion. N. Ditches and moist woods. Perennial.

——— *floscuculi.* Ragged Robin. N. Moist meadows, &c. Perennial.

Lycoperdon fornicatum. At Sulhampstead.

Lycopodium inundatum. At Virginia Water. Mr. Gotobed.

——— *selago.* Bog on Ufton common. Dr. Beeke.

Lycopsis arvensis. Wild bugloss. N. Corn fields and road sides. Annual.

Lycopus Europæus. Water horehound. B. Banks of streams and ponds. The juice gives a permanent colour to linen, wool, and silk. Gypsies stain their faces with it. Perennial.

Lysimachia nemorum. Pimpernel loosestrife. N. Moist shady places. Perennial.

——— *numularia.* Moneywort. N. Moist meadows. Perennial.

——— *vulgaris.* Yellow loosestrife. N. Banks of streams. Perennial.

Lythrum hyssopifolium. Hyssop-leaved willow herb. Wet ground near Windsor. Mr. Gotobed. Ann.

——— *salicaria.* Purple spiked willow herb. N. Marshes and banks of streams. Perennial.

Marrubium vulgare. Horehound. N. Road sides, &c. Medicinal. Perennial.

Matricaria chamomilla. Camomile feverfew. N. Corn fields, &c. Medicinal. Annual.

Matricaria

Matricaria parthenium. Common feverfew. N. Waste places. Medicinal. Perennial.

Medicago Arabica. Heart trefoil. By no means rare throughout the upper part of the county. Partially cultivated. Annual.

Medicago lupulina. Melilot trefoil. N. Cultivated in Norfolk, under the name of black nonsuch. Not very grateful to animals. Annual.

——— *saliva.* Lucern. N. Highly deserving of cultivation. Perennial.

Melampyrum pratense. Meadow cow wheat. N. It gives a yellow colour to butter. Annual.

——— *arvense.* Purple cow wheat. N. Corn fields, frequent. Annual.

——— *cristatum.* Crested cow wheat. N. Woods, &c. Annual.

——— *sylvaticum.* Yellow cow wheat. N. Woods and shady places. It is grateful to cows and sheep. Annual.

Melica uniflora. Wild melic. N. Woods and hedges. Perennial.

Mentha aquatica. Water mint. N. Watery places and banks of rivers. Perennial.

——— *arvensis.* Corn mint. N. Moist corn fields. If eaten by cows, it prevents the coagulation of their milk. Perennial.

——— *piperita.* Pepper mint. N. Watery places. Medicinal. Perennial.

——— *pulegium.* Pennyroyal mint. N. Moist heaths, &c. Medicinal. Perennial.

——— *viridis.* Spear mint. B. Perennial.

Menyanthes trifoliata. Trefoil buckbean. N. Ditches, &c. Medicinal. Two ounces of the leaves equal to a pound of hops, in ale. Perennial.

——— *nymphoides.* Fringed water lily. N. Slow streams, &c. Perennial. *Mercurialis*

Mercurialis perennis. Dog's mercury. N. Woods, shady places. Noxious to sheep, and deleterious to man. It dyes blue. Perennial.

Milium effusum. Soft millet. N. Wet woods, common. Not much valued as a grass. Annual.

Monotropa hypopithys. Yellow bird's nest. N. In the woods at Park-place. Perennial.

Montia fontana. Small water chickweed. N. Watery situations. Annual.

Myosotis arvensis. Field mouse ear. N. Walls, pastures, &c. Annual.

——— *palustris.* Water mouse ear. Wet ditches, &c.. Perennial.

Myosurus minimus. Little mouse tail. N. In gravelly soils, common. Annual.

Myrica gale. Sweet gale, Dutch myrtle. N. Golden Gully, near Newbury. B. This sweet smelling plant, which is rarely found in the midland provinces of England, is applicable to various useful purposes. Shrubby.

Myriophyllum verticilatum. Whirled millfoil. Ponds and ditches near Eton. Mr. Gotobed. Perennial.

Narcissus pseudonarcissus. Common daffodil. B. Woods, &c. Perennial.

Nardus stricta. Matweed. Coldash common. B. Near Eton. Mr. Gotobed. Perennial.

Narthecium ossifragum. Lancashire asphodel. Bogs on Greenham Common, near Newbury. B. Thought to be noxious to sheep, and to soften the bones of animals that eat it. Rather rare. Perennial.

Nepeta cataria. Cat mint. N. On a calcareous soil. Medicinal. Cats fond of it. Perennial.

Nymphæa alba. White water lily. N. Ponds and slow

slow deep rivers. One of the most beautiful of English plants. May be propagated in artificial pieces of water, by transplanting the bulbous roots in winter. Perennial.

Nymphæa lutea. Yellow water lily. N. Slow rivers, &c. The roots rubbed with milk will destroy crickets and cock-roaches. Medicinal. Peren.

Oenanthe fistulosa. Water dropwort. N. Ponds and ditches. Perennial.

——— *crocata.* Hemlock dropwort. B. Perennial.

——— *peucedanifolia.* Probably a variety of the former. Near Windsor. Mr. Gotobed.

Ononis arvensis. Hairy rest harrow. Light lands too common. Perennial.

——— *spinosa.* Thorny rest harrow. Barren pastures frequent. Perennial.

Ophrys anthropomorpha. Man orchis. Near the road from Wallingford to Reading. Morrett. Peren.

——— *apifera.* Bee orchis. On Streatley hills. B. A beautiful plant. Perennial.

——— *muscifera.* Fly orchis. N. Perennial.

——— *nidus avis.* Bird's nest orchis. N. Somewhat rare. Perennial.

——— *ovata.* Twayblade. N. B. Moist shady woods. Perennial.

——— *spiralis.* Spiral orchis. In Hampstead park. B. Perennial.

Orchis bifolia. Butterfly orchis. N. B. Woods and thickets. Perennial.

——— *conopsea.* Red handed orchis. N. Meadows, pastures. Perennial.

——— *latifolia.* Broad-leaved orchis. N. Moist meadows, &c. Perennial.

Orchis

Orchis maculata. Spotted orchis. N. Very common. Perennial.

——— *mascula.* Early orchis. N. Very common. Perennial.

——— *militaris.* Man orchis. N. B. Hill above Streatley, towards Aldworth. Rev. Mr. Scholfield. Perennial.

——— *ustulata.* Dwarf orchis. Same habitat as the preceding. Perennial.

——— *morio.* Meadow orchis. N. Common. Perennial.

——— *pyramidalis.* Pyramidal orchis. N. On the Berkshire side of the river, near Henley. B.*

Origanum vulgare. Wild marjoram. N. On a calcareous soil. Leaves sometimes used instead of tea. Medicinal. Perennial.

Ornithogalum pyrenaicum. Spiked Bethlem star. Near Langley. Dr. Lamb. Perennial.

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* Almost all the orchis tribe might be converted into salep, and would thus form a source of emolument to the poor. The best time to gather the roots, according to Dr. Percival, is when the seed is formed, and the stalk begins to fall. The new roots being separated from the stalk are to be washed in water, and the outer skin taken off. They are then to be placed on a tin plate, in an oven heated the same as for bread. In six, eight, or ten minutes, they will have acquired a transparency like horn, without being diminished in size. They are then to be removed into a room where they may dry and harden, which will take place in a few days; or they may be finished in a very slow heat in a few hours.

Salep thus prepared would yield a good profit, if sold at a shilling per pound, and would employ numbers of women and children. The *mascula*, or early orchis, is perhaps the best for this purpose; but it is highly probable that all the species may be used indiscriminately, without any danger. See Rudge's Report of Gloucestershire for further particulars relative to the culture and manufacture of the orchis into salep.

Ornithopus

Ornithopus perpusillus. Common bird's foot. N. Sandy banks, &c. Annual.

Orobanche major. Common broom rape. N. Parasitical. Perennial.

Orobus tuberosus. Heath peaseling, and a variety with linear leaves, which is found in Windsor Forest; but as far as I know, not mentioned in any botanical work. Dr. Noeheden. The roots, when boiled, are savoury and nutritious. Chewed raw, like tobacco, they will prevent the uneasy sensation of hunger. Perennial.

Oxalis acetosella. Wood sorrel. N. Medicinal. Its juice, crystalized, forms what is called the essential salt of lemons. Perennial.

Panicum verticillatum. Rough panick. N. Corn fields, &c. Annual.

——— *viride*. Green panick. N. Sandy fields. The panicks not much valued among grasses, and by no means plentiful. Annual.

Papaver argemone. Rough podded poppy. N. Corn fields. Annual.

——— *hybridum*. Mongrel poppy. B. Annual.

——— *rhœas*. Red poppy. Too plentiful in many corn fields. The petals give out a fine colour when infused, and a syrup prepared from it is kept in the shops, which possesses in some degree the properties of opium. Annual.

Parietaria officinalis. Pellitory of the wall. N. On old walls, &c. It is asserted, that the leaves strewed in granaries destroy weevils. Peren.

Paris quadrifolia. Herb Paris. Coppice below Greenham chapel. B. Medicinal. Perennial.

Pedicularis palustris. Marsh louse wort. N. Wet situations. Ungrateful to cattle. Perennial.

Peucedanum

Peucedanum officinale. Common sulphur wort. N. Medicinal. Perennial.

——— *silaus.* Meadow sulphur wort. N. Moist situations. Perennial.

Phalaris arundinacea. Variegated reed. N. Banks of rivers and ponds. As a thatch it is more durable than straw. Ribbon grass a variety of this. Perennial.

Phellandrium aquaticum. Water hemlock. Rivers, ditches. Medicinal. Biennial.

Phleum nodosum. Knotted Timothy grass. N. Perhaps a variety of the following.

——— *pratense.* Common Timothy grass. Not very grateful to animals. Perennial.

Picris echioides. Rough picris or ox tongue. Corn fields about Speen. B. An agreeable pot herb when young. Annual.

Pimpinella saxifraga. Small Burnet saxifrage. N. Dry gravelly soils. Perennial.

Pinus sylvestris. Scotch fir. N. Probably cultivated. It flourishes most in a poor sandy soil. A very valuable tree in plantations.

Plantago coronopus. Buckthorn plantain. N. Gravelly soil. Annual.

——— *lanceolata.* Ribwort plantain. Very common in the best pastures, particularly such as have been meliorated by irrigation. Perennial.

——— *major.* Great plantain. Road sides common. The green leaves applied to cuts by the country people. Perennial.

——— *media.* Lamb's lettuce. Chalky and marly soils. Sometimes used in salads. Perennial.

Poa annua. Annual meadow grass. Pastures common. Relished by cattle. Annual.

Poa aquatica. Reed meadow grass. Adapted for the banks of rivers. Perennial.

——— *minima.* Least meadow grass. N. Annual.

——— *nemoralis.* Wood meadow grass. N. Annual.

——— *pratenis.* Smooth-stalked meadow grass. Abounds in meadows that have been flooded in winter. Perennial.

——— *rigida.* Hard meadow grass. N. Dry sandy places. Annual.

——— *trivialis.* Bird grass, N. Moist meadows, &c. a valuable and productive grass, probably the famous Orcheston grass. Perennial.

Polemonium cæruleum. Greek valerian. B. Perennial.

Polygala vulgaris. Common milk wort. N. Heaths, pastures. Medicinal. Perennial.

Polygonum aviculare. Knot grass snake weed. Road sides, &c. frequent. If cultivated, the seeds would answer the same purposes as those of the *polygonum fagopyrum*, or buckwheat, which has already been noticed among crops. Annual or biennial.

——— *bistorta.* Great bistort or snake weed. N. Medicinal. Perennial.

——— *hydropiper.* Water pepper. Acrid, dyes wool yellow. Medicinal. Annual.

——— *persicaria.* Spotted snake weed. Ditches, fields, &c. Annual.

Polypodium vulgare. Walls of Windsor Castle. Mr. Manningham.

Polytrichum urnigerum. On a steep wet bank near Virginia Water. Mr. Gotobed.

Populus alba. White poplar, or abele tree. Loves low situations in a clayey soil. Wood soft, but convertible

convertible to various useful purposes. Grows quick, and bears cropping.

Populus tremula. Aspen tree, or trembling poplar. Moist places most frequent. Wood light, white, and soft, and durable in the air. Easily transplanted.

Potamogeton natans. Broad leaved pond weed. The leaves an agreeable shade to fish. Roots grateful to swans. Perennial.

——— *pectinatum.* Fennel-leaved pond weed. B. Per.

Potentilla anserina. Silver weed. Common. Medicinal and esculent. Perennial.

——— *argentea.* Hoary cinquefoil. N. Meadow pastures, &c. on a gravelly soil. Perennial.

——— *reptans.* Common cinquefoil. Medicinal. Per.

Poterium sanguisorba. Upland Burnet. On a calcareous soil. Sometimes cultivated in this county. Affords early feed in the spring. Will yield three crops in the summer; but is not very grateful to cattle. Perennial.

Prenanthes muralis. Wall ivy leaf. N. Walls, woods. Perennial.

Primula elatior. Ox lip. B. Near Newbury. Peren.

Prunella vulgaris. Common self heal. Meadows and pastures. Perennial.

Prunus padus. Bird's cherry. Woods, hedges. Fruit nauseous, but gives an agreeable flavour to wine or brandy. Bark medicinal. Shrubby.

——— *spinosa.* Black thorn, or sloe tree. Hedges, common. Fruit austere till mellowed by frost; frequently mixed with home wines. Medicinal.

Pyrola minor. Lesser winter green. N. Woods. Perennial.

Pyrus

Pyrus malus. Crab tree. Woods, hedges. The parent of apple trees. Still much used as a stock to graft on. Wood useful. Juice applied to several purposes. Injurious in hedges, as forming gaps.

Quercus robur. Oak. On the more stiff and deep soils, the oak thrives luxuriantly in this county, and might be cultivated to a far greater extent than it is, particularly in Windsor Forest.

——— *sessiliflora* of Smith. This is mentioned by Ray as being found about Newbury; but I never saw more than one tree, and that had been transplanted as a curiosity. B.

Radiola milleagria. All seed. B.

Ranunculus acris. Butter cups. Very common in pastures and meadows. It is acrid, and disliked by animals in general, though sheep will eat it. Perennial.

——— *aquatilis*. Water crow-foot. N. Ponds, &c. Horses, cows, and pigs, eat it with avidity. Per.

——— *arvensis*. Corn crow-foot. Corn fields. Acrid and dangerous to animals. Annual.

——— *bulbosus*. Bulbous crow-foot, or butter flower. Perennial.

——— *ficaria*. Common pile wort. Common. Less acrid than some of the species. Perennial.

——— *hirsutus*. N. Moist clayey places. Allied to the *bulbosus*. Annual.

——— *repens*. Creeping crow-foot. Moist situations. Perennial.

——— *sceleratus*. Celery leaved crow-foot. N. Whole plant corrosive. Beggars are said to ulcerate their feet with it, in order to excite compassion. Annual.

Raphanus

Raphanus raphanistrum. Wild radish, or charlock. N. Among corn. Annual.

Reseda lutea. Base rocket. N. Chiefly in a calcareous soil. Annual.

——— *luteola.* Dyer's weed. N. Uncultivated spots. affords a beautiful dye. Might be cultivated in some of the sandy soils of Berkshire. Annual.

Rhamnus catharticus. Buckthorn. Hedges, &c. Very purgative. The juice of the berries mixed with alum forms sap green. Shrubby.

Ribes grossularia. Gooseberry. B. Plentiful. Shrubby.

Rosa arvensis. White flowered dogrose. N. Hedges, &c. Shrubby.

——— *canina.* Dog rose. Wild briar. Woods, hedges. Medicinal. Shrubby.

——— *spinosissima.* Burnet rose. B. Heaths, &c. Its ripe fruit not ungrateful.

——— *rubiginosa.* Sweet-briar rose. B. On the road side from Newbury to Oxford, near Snelsgrove.

Rubus cœsius. Bramble, or dewberry bush. N. Woods, hedges. Shrubby.

——— *fruticosus.* Blackberry bush. N. Berries, not unpleasant. The green twigs will dye black. Shrubby.

——— *idæus.* Rasberry bush. Coppice, on the west of Chapel farm. In Tubney wood. M.

Rumex acetosa. Common sorrel. Leaves eaten in sauces and salads. Perennial.

——— *acetosella.* Sheep's sorrel or dock. Ought to be extirpated. Perennial.

——— *crispus.* Curled dock. Noxious in pastures. Medicinal. Perennial.

——— *hydro-lapathum.* Water dock. Medicinal. Per.

Rumex

Rumex sanguineus. Dock bloodwort. N. Woods. Bien.

Ruscus aculeatus. Butcher's broom. N. Useful in domestic economy. Shrubby.

Sagina procumbens. Chickweed breakstone. N. Walls, roofs, &c. Perennial.

Sagittaria sagittifolia. Arrowhead. Ditches, &c. Cultivated by the Chinese, on account of the bulb, which forms a pri cipal part of their food.

Salix aurita. Round-eared willow. N. Shoots slender and pretty flexible. Peren ial. Shrubby.

——— *cinerea*. Sallow willow. N. Wood and bark both valuable.

——— *fragilis*. Crack willow. Common. A quick grower, and bears lopping.

——— *monandra*. Rose willow. N. All kinds of twig work made of its long flexible shoots. A rose-like excresence common on the ends of the branches, whence its name.

——— *pentandra*. Sweet willow. N. The branches make springles, &c.

——— *triandra*. Smooth willow. N. The bark will cure agues.

——— *repens*. Creeping willow. B. On Greenham common.

——— *rubra*. Red willow. N. Between Maidenhead and Windsor. The twig is in great request. Allied to the *viminalis*, or osier.

——— *viminalis*. Osier. There are three varieties, the Spanish, the French, and the new kind. All much esteemed, and much cultivated.

——— *vitellina*. Yellow willow. N. The shoots used by crate and basket makers. Wood white and very tough.*

* To botanists I would beg leave to recommend a particular attention

Salvia verbenaca. Wild clary. N. B. Meadows, pastures. Perennial.

Sambucus nigra. Common elder. Woods and damp hedges. The wood hard, tough, and applicable to several useful purposes. Sheep infected with the rot will cure themselves by eating the bark, if accessible to them. Elder trees destructive to blights; but they should not be planted too near dwelling houses, as the narcotic smell from the blossoms is injurious. The flowers make an useful simple water; and the berries are advantageously used in home made wines. Shrubby.

Sanguisorba officinalis. Great Burnet. Ditches about Greenham mill, near Newbury. B. Perennial.

Sanicula Europæa. Common sanicle. N. Woods, thickets. Perennial.

Saponaria officinalis. Soap wort. Hedges near Old Windsor. Mr. Gotobed.

Saxifraga granulata. White saxifrage. N. Dry pastures. Perennial.

——— *tridactylites.* Rue leaved saxifrage. N. Walls, roofs, &c. Annual.

Scabiosa arvensis. Field scabious. Corn fields, too common. Perennial.

——— *succisa.* Devil's bit scabious. Frequent. Medicinal, &c. Perennial.

Scandix cerefolium. Common chervil. Hedge near

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to the genus *salix*. If published as a monograph, it would be a most acceptable present to the public. I have long formed a plan of this kind; but want of health and leisure are likely to prevent its execution. It would give me pleasure, however, to see it taken up by some more competent person. The value of the willow tribe is not unknown to planters; but from observation, I am convinced the most suitable and profitable species are frequently overlooked, for want of better information on the subject.

Windsor

Windsor, probably from a garden. Mr. Gotobed. Annual.

Scandix pecten veneris. Common Shepherd's needle. Corn fields, too frequently. Annual.

Schœnus albus. White flowered rush grass. Bullmarsh heath. Mr. Rudge.

——— *compressus.* Compressed rush grass. Plentiful about Newbury. B. Perennial.

——— *nigricans.* Near Newbury. B. Perennial.

Scirpus aciculatis. Aciculated club rush. Bullmarsh heath. Mr. Rudge. Perennial.

——— *sylvaticus.* Wood club grass. Near Sunning. Mr. Rudge. Perennial.

Scrophularia aquatica. Figwort. N. Banks of rivers, &c. Perennial.

——— *vernalis.* Yellow figwort. Common about Bucklebury and Marsom. B. Biennial.

Scutellaria galericulata. Blue skull cap. B. Boggy grounds and ponds. Perennial.

——— *minor.* Lesser skull cap. B. Same habitats. Perennial.

Sedum acre. Pepper stone crop. N. Walls, rocks, &c. Very acrid. Perennial.

Sempervivum tectorum. House leek. N. Walls, &c. Medicinal. Perennial.

Senecio jacobæa. Ragwort groundsel. Pastures, &c. Common. Dyes yellow. Animals not fond of it. Perennial.

——— *vulgaris.* Common groundsel. Seeds acceptable to birds; plant ungrateful to animals. Annual.

Serapias grandiflora. White helleborine In the woods of Sir William East, Hall-place, Hurley. Dr. Smith. Perennial.

Serapias latifolia. Common helleborine. N. Perennial.

Serratula arvensis. Way thistle. Corn fields, too common. Its appearance incompatible with careful husbandry. Perennial.

Sherardia arvensis. Little field madder. N. Corn and fallow fields. Annual.

Sinapis alba. White mustard. N. Corn fields, &c. Sown in winter, and early in the spring, to supply salading. Annual.

——— *arvensis.* Charlock. A very troublesome weed in corn fields, but being an annual, may easily be extirpated.

——— *nigra.* Common mustard. N. The seeds make the condiment so much in request at our tables. Medicinal. Annual.

Sison amomum. Hedge stone wort. N. Moist woods and hedges. Perennial.

——— *segetum.* Corn parsley. N. Annual, or Biennial.

Sisymbrium nasturtium. Common water cresses. Springs and slow streams. A wholesome esculent in winter and spring. Biennial.

——— *sylvestre.* Water rocket. N. Marshy and watery places. Perennial.

——— *terrestre.* Annual water cress. N. Wet ground. Annual.

Sium angustifolium. Upright water parsnip. Ditches, &c. about Radcot Bridge, near Faringdon. Mr. Fardon. Perennial.

——— *nodiflorum.* Creeping water skerret. N. Medicinal. Perennial.

——— *repens.* N. Allied to the *nodiflorum.* Perennial.

Smyrnium olusatrum. Common Alexanders. N. Formerly cultivated in our gardens instead of celery.

Solanum

Solanum dulcamara. Woody nightshade. Hedges, common. Poisonous, but medicinal in proper hands. Perennial.

——— *nigrum.* Common nightshade. Rubbish, &c. Annual.

Solidago virga-aurea. Golden rod. B. Perennial.

Sonchus oleraceus. Sow thistle. Very common. Leaves may be eaten among other pot herbs. A favorite with different animals. Annual.

Sorbus aucuparia. Service, or quicken tree. N. Wood of considerable use. Berries esteemed for different purposes.

Sparganium ramosum. Greater burweed. N. Perennial.

——— *simplex.* Simple burweed. N. Perennial.

Spartium scoparium. Broom. Dry pastures. A beautiful and useful shrub. Medicinal. Forms a good cover for game.

Spergula arvensis. Corn spurry. Seeds nutritious to birds. Horses, sheep, &c. eat the plant, which deserves more attention. Annual.

——— *nodosa.* Knotted spurry. B. Peat pits about Newbury. Perennial.

Spiræa filipendula. Common drop wort. N. Perennial.

——— *ulmaria.* Meadow sweet. Common. Perennial.

Stachys palustris. Clown's wound wort. N. Watery places. Perennial.

——— *sylvatica.* Hedge nettle woundwort. N. Hedges, &c. This plant will dye yellow. Smell fetid. Perennial.

Stellaria glauca. Glaucous leaved stitchwort. Moist meadows near Eton. Mr. Gotobed.

——— *graminea.* Lesser stitchwort. N. Hedge banks, &c. Annual.

——— *holostea.* Greater stitchwort. Frequent. Peren.

Stellaria

Stellaria nemorum. Broad leaved stitchwort. N. Moist situations. Perennial.

——— *uliginosa*. Bog stitchwort. N. Annual.

Symphytum officinale. Common cornfrey. N. Banks of rivers. Esculent. Perennial.

Tamus communis. Black briony. N. Hedges, &c. The young shoots when dressed eat like asparagus. Roots acrid. Perennial.

Tanacetum vulgare. Common tansey. N. A warm deobstruent bitter. Meat rubbed with the leaves will not be attacked by the flesh-fly. Perennial.

Taxus baccata. Common yew tree. N. Undoubtedly wild in the neighbourhood of Aldworth. M. Dangerous to cattle. I have known sheep and horses killed by eating the leaves. Wood durable and beautiful.

Teucrium scorodonia. Wood sage. N. Communicates the flavor of hops to beer, but gives too deep a colour. Perennial.

Thalictrum flavum. Meadow rue weed. N. Moist meadows. Medicinal. Perennial.

Thesium linophyllum. N. On Streatley hill. Rev. Mr. Scholfield. Perennial.

Thlapsi arvense. Treacle mustard. N. The seeds have the acrimony of mustard. The plant communicates a bad flavour to milk. Annual.

——— *bursa pastoris*. Shepherd's purse. Common. Annual.

——— *campestre*. Bastard cress. N. Sunny exposures, Biennial.

Thymus acinos. Basil thyme. N. Dry pastures. Annual.

——— *serphyllum*. Wild thyme. Common on heaths and pastures. Very fragrant. Not much relished

ed by cattle. A good tea for the nervous. Perennial.

Tillæa muscosa. Mossy red shanks. In the poor soils about Frilsham. B. Perennial.

Tordylium maximum. N. Banks of fields. Annual.

Tormentilla officinalis. Tormentil. N. Barren pastures The roots among the strongest of vegetable astringents. Perennial.

——— *reptans.* Creeping tormentil. N. Perennial.

Tragopogon pratense. Yellow goat's beard. N. B. Upland pastures. When cultivated in gardens the roots are esculent, and called salsafie. Biennial.

Trifolium filiforme. Small trefoil. N. Poor sandy heaths. Annual.

——— *melilotus officinalis.* Melilot trefoil. Not unacceptable to cattle. Annual or Biennial.

——— *melilotus ornithopoides.* Bird's foot trefoil. N. B. On Greenham heath. Annual.

——— *pratense.* Red clover, honey suckle trefoil. N. Not unusually cultivated. Meadows, pastures. Biennial.

——— *procumbens.* Hop trefoil. Allied to the last. Annual.

——— *repens.* Dutch clover. N. Meadows and pastures. Perennial.*

Triticum caninum. Dogs wheat. N. Woods and hedges. Annual.

——— *repens.* Squitch grass; couch grass. One of the most common and troublesome weeds in neglected

* Notwithstanding all that has been written on the subject of the trefoils, they are not sufficiently discriminated by agriculturists, important as they are among artificial grasses. Much confusion likewise arises from the discordancy and variety of the provincial names.

lands

arable lands, and which can only be effectually destroyed by fallowing in a dry summer. Peren.

Turritis glabra. Tower mustard. N. In a gravelly soil. Annual.

Tussilago farfara. Colt's foot. N. Pastures, &c. The leaves form the basis of the British herb tobacco. The downy substance under the surface of the leaves dipped in a solution of saltpetre, and dried, makes the best tinder. Medicinal. Peren.

Ulex Europæus. Furze. About Pusey and other parts of this county, very luxuriant. Cut for faggots. Broused by cattle. A good fence in bleak situations. Perennial.

Ulmus campestris. Common elm. In the hedge rows of the Vales of the White Horse and the Kennet, and round villages, makes a handsome appearance. The variety called the wych elm, grows to a very large size in the vicinity of Newbury. The value of elm is well known.

Urtica dioica. Common nettle. The stalks may be dressed, like hemp or flax, for making cloth or paper. Young shoots esculent. Perennial.

——— *pilulifera.* Roman nettle. N. Rubbish. An.

Utricularia vulgaris. Bladderwort. B. Perennial.

Vaccinium myrtillus. Bilberry. B. Newbury Heath. The first tender leaves a good substitute for tea. Berries acceptable to children. Shrubby.

Valeriana dioica. Small valerian. N. Moist meadows. Perennial.

——— *officinalis.* Great wild valerian. N. Plentiful about Newbury. The root collected for the London market. B. Perennial.

Verbascum blattaria. Yellow moth mullein. Binfield, Mr. Rudge. Annual.

Verbascum

Verbascum nigrum. Black mullein. N. Hedges, &c. Perennial.

——— *thapsus*. Great white mullein. N. Medicinal. Biennial.

Verbena officinalis. Vervain. Waste places. Common. Annual.

Veronica anagallis. N. Annual.

——— *arvensis*. Wall speedwell. N. Old walls, &c. Annual.

——— *beccabunga*. Brooklime. N. Medicinal. Per.

——— *chamædrys*. Wild germander. N. Pastures, &c. Perennial.

——— *hederæfolia*. Ivy chickweed. N. Annual.

——— *hybrida*. Welsh speedwell. N. Perennial.

——— *montana*. Mountain madwort. B. Perennial.

——— *officinalis*. Common speedwell. N. Heaths, &c. The leaves have been recommended as a substitute for tea. Perennial.

——— *scutellata*. Narrow leaved speedwell. B. Per.

Viburnum lantana. Wayfaring tree. B. Hampstead coppices. The bark of the root is manufactured into birdlime. Shrubby.

——— *opulus*. Water elder. B. Shrubby.

Vicia cracca. Tufted vetch. N. Hedges, &c. Very nutritious. Perennial.

——— *sativa*. Common vetch. Much cultivated, and found extremely profitable, particularly when taken as a meliorating crop. Annual.

——— *sepium*. Bush vetch. N. Woods, hedges, &c. Shoots early, and vegetates late, but is difficult to be cultivated on a large scale, from the seeds being subject to be devoured by the larvæ of an insect. Perennial.

Vinca major. Great periwinkle. B. Berks, but near Albury,

Albury, Hants, certainly naturalized, if not indigenous. May be planted to advantage under the eves of houses, as it is not liable to be affected by the droppings. Perennial.

Vinca minor. Lesser periwinkle. B. Abundant in a coppice near the road from Greenham common to Lower farm. Perennial.

Viola canina. Dog violet. N. Shady places, heaths, &c Perennial.

——— *hirta*. Hairy violet. About Bagnor, near Newbury. B. In Basildon wood. Mr. Forster, Jun.

——— *odorata*. Common, or sweet violet. Frequent. Medicinal. Perennial.

——— *palustris*. Water violet. N. B. Common in Berks, Perennial.

——— *tricolor*. Heartsease, or pansies. N. Annual.

Viscum album. Misletoe. N. It grows abundantly and luxuriantly on an avenue of lime trees, in front of Sir W. East's, Hall-place, Hurley. M. Of the berries and bark birdlime may be made. Propagated with difficulty. By opening the bark, however, of an old apple tree, and rubbing the berries over the incision I once made it vegetate; but unfortunately the tender plant was wholly consumed by a slug, which I found adhering to the spot.

In this catalogue, the more rare, useful, or noxious plants, are principally regarded, as being most interesting to agriculturists. The cryptogamous plants are generally excluded, as their enumeration would have led me too far, even had my authorities been more extensive.

"I have met with several of that class," says Dr. Noeheden, "especially in Windsor Forest, not unworthy

thy the attention of a botanist. The cryptogamic plants of Berkshire are in all the four orders: *filices*, *musci*, *algæ*, *fungi*; but among them the mosses, lichens, and fungi, are the most interesting. Of the latter, Windsor Forest sometimes produces valuable specimens."

SECT. II.—ARTIFICIAL GRASSES.

Though Berkshire, as has been noticed in the preceding section, contains a considerable proportion of meadows and natural pastures, it is in a great measure owing to the introduction of artificial grasses, that the farmers, in general, are enabled to maintain such a quantity of stock, and to keep their land in a state so productive of corn. The kind of grass sown, as in other counties, undoubtedly varies with soil and situation; and perhaps the most proper sorts are not always chosen; but in general there is no want of judgment in this respect among the more intelligent cultivators; and some spirited attempts are made to introduce new plants, when they are found more productive, or more nutritious to cattle, than what have been usually cultivated.

That it is necessary to vary from the customary routine, and in many instances to adopt new and improved modes of supporting stock, cannot for a moment be doubted by those who consider, that a succession of green feed is one of the greatest advantages a farmer can possess, and that the less recourse he is obliged to have to his hay for store animals, the more his profits will be increased. And that our indigenous, or naturalized gramineous plants, in conjunction with oleraceous vegetables and roots, might, if judiciously selected,

ed, effectuate this purpose in a high degree, will not be denied by any well informed person, who has studied the economy of nature, and who wishes to render her productions subservient to his ends.

The grasses usually, or occasionally, cultivated in Berkshire, are;

RYE GRASS (*lolium perenne*).

This kind of grass, which is commonly sown on the Chalk district, is certainly less nutritious than many others, and more exhausting in its nature. If intended for permanent pastures, it is generally found to fail in a very few years; and, unless the seed is changed, it will degenerate under any mode of management. It has the advantage, however, of being cheap, and of producing early feed, an object of no small importance on a farm. The variety first introduced by Mr. Pacey, of Northleach, possesses this latter quality in a superior degree, and therefore has been cultivated by several discerning agriculturists. Mr. Tull, of West Ilsley, finds that it furnishes feed a fortnight or three weeks earlier than the common kind, and his observation has been confirmed by others who have tried it.

Rye grass is seldom sown singly, but mixed in certain proportions, according to the nature of the soil, with trefoil or hop clover, with white or Dutch clover, or with red clover, and sometimes with a mixture of all these.

If made into hay, it ought to be cut early, or its juices will be exhausted. Horses fed on it are found to preserve their wind better than on hay of other grasses.

Mr. Brown, of Idstone, who occupies a considerable quantity of upland downs, as well as vale land, informed

formed me, that the practice in his neighbourhood was to sow one part of the fields with rye grass, trefoil, and honeysuckle; and another with rye grass, broad clover, and trefoil, varying every four years, to prevent the land from getting sick of the same kind of seeds.

RED CLOVER, BROAD CLOVER (*trifolium pratense*),

Is much cultivated in the Vale of White Horse, and on the strong and fertile soils, in general, throughout the county. In such situations, it is usually sown alone, and commonly mown once, and then fed off, as a preparation for wheat. Sometimes, however, the cultivated grasses are allowed to stand two years; but this practice is condemned by the best farmers, who, notwithstanding the expence of laying down land with clover, think it more advantageous to plow on the back of one year's leys, than to suffer it to stand for two. About fourteen pounds of seed are allowed to an acre; but the quantity ought to vary with the soil, and the condition of the land. In pretty favorable seasons, the greatest part of the seeds sown will vegetate on lands in good heart, and therefore the smaller quantity is required; but this cannot be expected to be the case on exhausted or ill managed lands; and hence the necessity of a more ample quantity of seed, of whatever kind it may be.*

Cattle are apt to be hoven, if turned into a field of luxuriant clover, unless they are kept moving, which is the best preventive.

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* The first clover seed was brought by Sir R. Weston from Brabant about 1645, and sown in Surry. Some years after, clover hay reduced the price of meadow hay from 3*l.* to 1*l.* per load.

COW, OR MARL GRASS (*trifolium medium*).

Some able botanists contend, that the cow, or marl grass is only a variety of the *trifolium pratense*, and that the *trifolium medium* is distinguished from it by its propagating itself by the root. Cultivated plants, indeed, differ so much from those in a state of nature, that it is often difficult to determine their species. The cow grass appears to be longer in the stalk, more branching, and crooked, than the common clover. It is likewise later, the blossom is larger, and of a deeper purple, and the whole plant has a more luxuriant appearance.

It affects a loamy soil, grows spontaneously on marl land, and was first collected in Somersetshire about sixty years ago. As it continues longer in the land, and bears dry weather better, it is considered as a valuable substitute for common clover, though less grateful to sheep. From twelve to fourteen pounds of seed per acre is the usual quantity sown.

DUTCH CLOVER (*trifolium hybridum*),

Is not unfrequently sown with other grasses, in a larger or smaller proportion, according to the fancy of the farmer. About Hurst, it is a common practice to sow of broad clover eight pounds, yellow trefoil, or hop clover, four pounds, and Dutch, or white clover, two pounds, per acre.* If sown alone, about eight or nine pounds will be sufficient. It is getting into high estimation in the neighbourhood of Bray, and other places, and is sometimes called honeysuckle grass, from the sweetness of its smell. To all sorts of

* S. Nichols, Esq.

cattle

cattle it forms an agreeable pasture, and especially to sheep, which thrive on it prodigiously. Even swine will fatten on this grass, the seed of which was imported from Flanders for some time after it began to be cultivated here, though it appears to be an indigenous plant. It never wears out by being close fed.

WHITE CLOVER (*trifolium repens*).

This is frequently confounded with the Dutch clover. It affects a light soil, is much improved by rolling, and yields a very sweet hay when mixed with red clover, rye grass, and nonsuch. Sheep are not very fond of it; and this is, probably, one reason why it is less cultivated than it deserves to be. It appears to be the Irish shamrock; and the powdered flowers of this clover being made into bread, were eaten by the natives of the sister island before the introduction of potatoes. It will bear flooding, which the red clover will not.

HOP TREFOIL, OR CLOVER (*trifolium agrarium procumbens*).

This is very frequently sown with rye grass, &c. especially on the lighter soils, and is found to improve the quality, and augment the quantity, of the feed on hay.

It is an annual, and is often confounded, in this and other countries, with the *medicago lupulina*, trefoil, or black grass, or nonsuch, as it is called, a plant of the same duration, but much less grateful to animals. I have already adverted to the uncertainty attending the trefoils, and hence often great disappointments. Some are annual, some biennial, and others perennial. If annuals or biennials are sown where it is intended to have

have a permanent pasture, the consequence must be obvious.

From the advantage of peat ashes, a mineral produce, in a manner peculiar to Berkshire, the clovers and other sown grasses, receive every assistance, where practicable, by top dressing, at the expence frequently of 15*s*. an acre. The peat ashes spread on the land about March, in the proportion of from twelve to twenty bushels per acre, promote the luxuriance and forwardness of the crop to a great degree, at the same time that they improve the soil for a future crop.

It has been maintained, that peat ashes are applicable only to artificial grasses; but the practice of some able farmers proves the contrary. If the natural meadows and pastures lie sufficiently high and dry, they will receive considerable benefit from a top dressing with ashes of any kind, if not spread too thick.

When, from particular circumstances, clovers, or their mixtures, are to remain two or more years, which is contrary to the prevailing usage, it will be found most beneficial to feed off the first year and mow the second. Dr. Beeke, of Ufton, shewed me a field near his house, which had been divided by hurdles, and part fed and part mowed the first year. The plant on the former portion was incomparably better during the second year; and it might be seen to an inch where the hurdles had been placed, by the different appearance of the vegetation.

Clovers will not thrive if too frequently committed to the same piece of land. This is an observation, however, not confined to Berkshire, but it receives confirmation from its best agriculturists. Even with the addition of peat ashes, it is necessary to vary the crops of

artificial grasses occasionally, in order to secure a thriving plant.

SAINTFOIN (*hedysarum onobrychis*).

This valuable plant was first introduced from France. It thrives best in a chalky and rubbly stone land, with a hard and compact substratum, which renders it extremely well adapted for many parts of this county. On the downs and uplands, where natural grass is scarce, it is the best substitute for meadows, and enables the farmer to keep a large stock, where, without such an auxiliary, it would be impossible. Yet it is not many years since saintfoin was cultivated here; and though its advantages are felt and acknowledged, it is still less extensively sown than it ought. The reason, probably, is, that as corn brings a very high price, the cultivator is unwilling to deprive himself of that advantage, on a portion of his land, for nine or ten years together; for so long saintfoin will last, if well laid down, and occasionally top dressed and weeded. The policy of this caution, however, is extremely equivocal. It is not so much the quantity of land in aration, as its being well managed, that fills the granary, and supplies the market. Many considerable tracks of land in this county are naturally ill adapted for corn; but by a wise provision of nature, they are the very soil in which saintfoin flourishes most, that is, where the substratum is pretty near the surface, and so hard as to prevent the roots from penetrating too deep, and exhausting the plant.

I have the pleasure to observe, however, that I found saintfoin cultivated in very different soils and situations, a proof that its advantages are better understood than formerly. It is to be seen at Standford, in the Vale,

about Ilsley, Blewbury, Fawley, Shefford, Boxford, Remenham, Hurley, Pangbourn, Reading, and other places, where it is sometimes fed off with sheep,* but generally mowed once.

It is generally sown broad cast, from two to three bushels per acre; but if the land is laid down without any other crop, it would probably answer best drilled, which would save half the seed, and allow its being kept free from weeds.

LUCERN (*medicago sativa*).

Lucern requires a deep rich dry loam; and in proper situations, is found the most productive of all the artificial grasses.† If sown broad cast, it will require from sixteen to twenty pounds of seed per acre. Cut and carried to horses, or other cattle, from May to Michaelmas, an acre of it will maintain double the number that the same quantity of meadow land would do. It is little cultivated, however, in Berkshire, though much approved by those who have tried it. The Rev. Dr. Hughes, of Uffington, grows it on a small scale. About ten acres is sown with it at Bisham. I likewise observed some at Hurst, and at Suttonwick, near Abingdon. It was first introduced into England from France, in 1653.

HEART TREFOIL, OR SNAIL-SHELL MEDICK (*medicago arabica.*)

This plant, though indigenous, has probably never been cultivated, except in Berkshire, and its history is

* Sheep by feeding the saintfoin too close very much injure it. N. D.

† The writer of this planted a spot of ground in his garden with lucern, about ten years ago, which is still in perfection. It was drilled, and is annually hoed, weeded, and dressed with ashes or short dung. In the worst seasons, it has been cut four times, and generally five times.

remarkable.

remarkable. In his voyage round the world, Captain Vancouver found some seeds in a vessel which had been wrecked on a desert island, and on his return he presented some of them to his brother, John Vancouver, Esq. then residing near Newbury. Mr. Vancouver gave some of the seeds to Mr. James Webb, of Wellhouse, in the parish of Frilsham, who imparted his treasure to his brother, Mr. Robert Wells, of Calcott, in the parish of Tylehurst, between Reading and Newbury.

The seeds were sown; expectation was raised; Dr. Lamb and Mr. Bicheno, of Newbury, with the vigilance of botanists, examined their progress, and were in hopes to have been able to announce to the agricultural world, a valuable plant from the remotest islands in the Pacific, when lo! it turned out to be the *medicago arabica*, which is a native Berkshire plant.

This fortuitous introduction, however, of the heart trefoil is likely to be advantageous. The two brothers have cultivated it with success; say it produces a luxuriant herbage, and that cattle are excessively fond of it. "It stands the winter well, and a crop may be obtained at any time. It has the advantage of Lucern, in not being easily choaked, and in growing on a light soil, but without doubt produces the greatest abundance in a good soil." They have hitherto sown it broad cast, and are determined to persevere, having now collected a sufficient quantity of seed to extend their expements to some acres of land.

BURNET (*poterium sanguisorba*),

Has been cultivated, on a small scale, by Mr. Loveden; and for his lighter dry soils it is not ill adapted,

though it would probably thrive better on the chalky hills.

CORN SPURRY (*spergula arvensis*, &c.).

Though this plant is not yet cultivated, it grows abundantly in Berkshire, and seeds might easily be collected in any quantity. On the suggestion of an intelligent friend, I would recommend it to be tried on the poor soils about Frilsham and Yattendon. Roucel, in his *Flora du Nord de la France*, says it is an excellent late fodder for cows; and it appears to be cultivated in Brabant, Holland, and Germany, and used both green and made into hay.

The *spergula nodosa*, or knotted spurry, though perhaps not equally grateful to animals, naturally overruns the peat pits on the Kennets, and therefore might be sown with certain effect in such situations.

SECT. III.—HAY HARVEST.

From the scarcity of spring feed, and the consequent necessity of employing every practicable resource to supply that want, grass lands are commonly hained up too late, and hence the crop is often inferior in quality, as well as in quantity. Nature, however, serves up her productions with a liberal hand; and man has only to select and to cultivate what are best suited to his purpose. By attending to the progress of vegetation in the different plants which are applicable to the support of animals, a deficiency of food for them, even in the worst seasons, can never be very sensibly felt, nor would the profits and advantages of the hay harvest be sacrificed to temporary accommodations in the spring.

Common

Common meadows, indeed, where usage determines the time of haining up, must ever be subject to their own absurd and peculiar laws; and till common rights are swept from the code of English agriculture, improvements must be stationary! but on enclosed and well managed farms, every season may be made to produce its own proper supplies, and unthrifty anticipations of crops be no longer required.

1. After haining up, and top dressing, where the grass lands are allowed that advantage, the rest is left to genial suns and fructifying showers. Hay, like corn harvest, varies nearly a fortnight in its commencement, between the upper and the lower part of the county. In the former, artificial grasses are usually fit for the scythe about the end of May, and the meadows are in full perfection by the middle of June. Between the two kinds of grass crops there is not an interval of repose; no sooner is the one finished, than the other invites the mower. The juices of plants are certainly exhausted by standing too long. A full swathe, no doubt, is desirable; but to suffer the grass to stand till the roots become withered, and the blossoms shrivelled up, merely on the score of obtaining more in bulk, is an error which few Berkshire farmers would commit, though it is too common in most parts of the kingdom.*

Whoever has taste to feel and to enjoy the beauties of nature, must be enraptured with the scene which hay-making presents. It exhibits an assemblage of rural sweets; every circumstance of time and object conspire to render it delightful.

* I have noticed in Wales, in particular, that the grass is little better than straw before it is cut, and that the seeds, rather than the stalks, are likely to be nutritious to cattle.

In

In the process of mowing, making, and stacking hay,* Berkshire has nothing very peculiar, and a repetition of common practices would only swell this Report, without increasing its value. The scythe, the fork, the rake, are the implements employed, and men, women, and children, all lend their respective aids to forward this agreeable business. In fine weather, every operation proceeds with pleasure, and on the third day the hay is fit to be carried. Much, however, depends on the nature of the herbage, and the state of its growth. If of a succulent nature, and very tender, it will, of course, require long time in making; but this every farmer knows. It is the opinion of Mr. Loveden, and other enlightened and observant agriculturists, that the practice of putting the hay together in such a state as will produce what is called a sweat, is exhausting the best part of its juices. For colour and sweetness, his own hay generally produces perfect samples. Yet a medium, perhaps, is best; for as there is great danger from firing, if hay is put together too soon, as well as in rendering it brown, so that which is too much made on the ground, must lose a large portion of its nutritious qualities from exposure to an ardent sun. To obviate defects, and to combine the greatest number of advantages, it has been recommended, after the grass has been tedded and turned, to put it into larger and larger cocks, according as it will bear, and open it well at each removal, and under the most favorable state of the sun. The last cocks might contain a ton; and in this state of comparative security, it may remain till it has undergone a slight fer-

* It differs in nothing from that used in Middlesex, and other neighbouring counties.

mentation,

mentation, which once being checked, will never rise to the same degree in the rick. A funnel, however, or a chimney, in the middle of the rick, if large, is always advisable, on various accounts; and if the ground is covered with dry faggots, or brush wood, it will assist to prevent those exhalations from the earth which are apt to excite and increase fermentation.

When the weather is catching, either during the period of making or ricking, much attention is necessary. In the latter case, a large sail-cloth over a cross-bar, and hanging down on each side, like the roof of a house, is an excellent contrivance, and ought to belong to every tolerably sized farm. It is equally useful in corn harvest, and will serve to protect loaded waggons, as well as ricks.

2. The expences of labour in hay time vary with situation, and the kind of remuneration is not always the same. In the Vale of White Horse, about 15*s*. per week and beer, are the customary wages. In the upper part of the county, a guinea per week and beer are frequently allowed, and 18*s*. may be considered as the average of the whole. Sometimes the mowers receive half-a-guinea and maintenance. Half-a-crown by the day is the common wages of men, and one shilling of women, with beer, which is always allowed in some way or other. A bushel of malt to a labourer during the hay-making season, is sometimes given in lieu of beer; but though this may be an apparent, it is not a real saving, to the farmer. Severe labour cannot be supported without adequate nourishment; and it may be easily guessed what kind of beer a poor man is to make from a bushel of malt, if he is to have even the most moderate quantity every day.

If

If grass is mown by the acre, from 1*s*. 6*d*. to 2*s*. 6*d*. is the current price, according to the thickness of the crop.

SECT. IV.—FEEDING.

Grass in this county is seldom mowed twice; and unless the land is in a high state of cultivation, or receives great assistance from manuring, it is universally allowed that the practice would be injurious. In the Netherlands, however, where many cows are kept, and dairying is carried on with spirit and success, it has been observed, that in passing through the country, scarcely an animal of that kind is to be seen. They are all kept in their stalls, and the grass is daily mown and carried to them, by which means one half of it is saved, the cows are more at their ease, being neither annoyed by heat nor flies; and the quantity of dung made is prodigiously great. The grass being cut when very young, the land is less exhausted, though frequently cut thrice, than with us, where it remains on the ground before mowing, till a considerable number of the plants have ripened their seeds.

Whether this practice is adapted to farms so large as ours generally are, may perhaps be questioned; but on small farms, especially of the dairying description, it would be attended with very considerable advantages; and as far as home closes are concerned, it might be tried on farms of any magnitude, where cows and horses, rather than sheep, are the prevailing stock.

At a period when the expences of agriculture are so great, new modes of making the profits correspond with them, should certainly be tried. Already it is found beneficial to soil horses; and we have nothing but

but prejudice standing in the way of applying this to cattle.

At present, horses and cattle are generally turned into the pastures about the beginning of May. These last till hay harvest is over; and the latter math then takes up the stock, and carries it on till fatting cattle are removed to the stalls, and fed off for market.

The Thames meadows of themselves, indeed, are sufficiently rich to fat animals of a large size; and where grass alone will do, other substitutes should never be admited. There has, however, for some years been a prevailing rage, a ridiculous kind of competition among graziers, to produce the largest cattle and the fattest meat. Not only cows and oxen have been loaded with fat by unnatural food, but sheep have likewise been commended, not for the sweetness and tenderness of their flesh, but for their weight per quarter; though the tallow-chandler was chiefly benefited by the excess to which fatting has been carried. To produce the greatest quantity of wholesome food for man in the least time, and at the smallest expence, is the only criterion of merit in feeding; it is the only way to individual profit or public benefit; and I am happy to find that this fact again begins to be admitted and acted on. Reason and truth may be clouded for a time, but they will burst out in brighter lustre than before.

But this does not appear to me to be the proper place for entering into details respecting the feeding of animals. The subject more regularly falls under Chapter XII. where notice will be taken of the artificial modes of feeding cattle and sheep, used in this county.

Store animals are kept as long as possible at grass; and the sheep, especially those in the Chalk district, after ranging the downs during the day, are usually driven

driven to be penned at night on the land intended for wheat. On light soils they are of the utmost service, in this respect, not only by their manure, but their treading; but whether the animal is not as much deteriorated by driving too far, as the land is benefited, I must leave to those who join observation to experience, and who form their opinions not on collective authorities, the result of custom, but on single facts, which alone ought to be the basis of general conclusions.

CHAP.

CHAPTER IX.

GARDENS AND ORCHARDS.

WHEN we reflect what a large and valuable produce is obtained from a small spot of ground, laid down and cultivated in the garden style, it is a powerful argument in favor of a proportion of moderately sized farms, and of allotments of land being thrown to cottages, by which their inmates, if industrious, might earn a comfortable subsistence. Under the sections COTTAGES, and the POOR, this subject will be found treated at some length; but on every occasion, where it can be introduced with propriety, I feel it my duty to impress on the minds of the public, the vast advantages that would accrue from giving a stimulus to honest industry, by the hopes of an adequate reward.

It is a common and a fatal mistake to think that large estates or large farms are desirable, merely for the sake of their being so. The gentleman of fortune is continually anxious to increase his estate by new purchases, which will seldom pay him more than 4*l.* per cent. while, by improving what he already possessed, he might make 10*l.* In the same manner, the cultivator wishes to lay field to field, and farm to farm; and, in the spirit of an Alexander, is eager to conquer new *soils*, without being able in the full to enjoy the old. But let it be remembered, that except in gardens, scarcely an acre of land in this kingdom is yet improved to the utmost, and that it is more profitable, as well as more pleasant,

pleasant, to manage a small quantity of land well, than the largest extent in a negligent way, or with an inadequate capital.

From the prevailing nature of the soil, Berkshire cannot be expected to be a fruit county, in the general acceptation of the term; but horticulture is well understood, and the orchards in several places, though seldom made a principal object of attention, except by the poor, are not unproductive of profit.

The gardens belonging to the nobility and gentry are frequently spacious, and managed according to the most improved system. They produce not only kitchen vegetables, but also the choicest fruits, indigenous and exotic. The green houses often present an assemblage of rare and beautiful plants.

Of the botanical garden at White Knights, near Reading, the seat of the Marquis of Blandford, it is impossible for a votary of Flora to speak in adequate terms. It is one of the most beautiful and interesting spots in the kingdom. At a considerable expence, and with a degree of zeal and perseverance for which his lordship is distinguished, it is not only furnished with the most curious plants of both hemispheres, and many almost unique in Britain; but the arrangement of the hot and green houses, and their adaptation for the various purposes required, is judicious in the extreme. In the Marquis of Blandford, the science of Botany has found an able and an active patron: his skill is extensive and profound; and his whole domain bears internal evidence of a cultivated and correct taste, which would do honour to the ample fortune he was born to inherit.

At Buscot Park, the gardener has lately introduced a precaution for saving the blossoms of wall fruit from frosts

frosts and blights, which deserves to be mentioned. He suspends canvas from the top of the wall; and under this shelter, ash poles or small stakes are placed, to prevent the canvass from rubbing against the blossoms. The whole is removeable at pleasure. An inconvenience had been found in the use of nets, from their retaining moisture. But this plan, however excellent, can only suit persons of fortune, or the gardener who is to make a living by his fruit, and therefore can afford to be at some expence for its preservation. I do not recollect any other novelty, except what may be found in books of gardening, or dependent on the taste of the proprietor. The manner in which Mr. Loveden's hot-houses are warmed, is at once ingenious and economical, and may serve as a model for others.

In the neighbourhood of some of the principal towns the gardens are extensive, and cultivated with skill and assiduity. On a few acres thus managed, many families are maintained in credit, and live in comfort.

Mr. Mattingley of Faringdon informed me, that three brothers who followed the trade of gardening, with no more land than four or five acres, which however was their own, supported as many families very decently, and gradually acquired a portion of wealth. This is a strong proof of my position, that industry and judgment may exert themselves with effect within very circumscribed limits.*

Indeed there is scarcely a town or large village that does not afford an example of one or more persons at the same time gaining a comfortable independence by the fruits of their toils in gardens; and if so much may

* For a still more remarkable illustration of this leading principle, see chap. xv. sect. 7. respecting the family of Anns.

be

be raised on a very few acres for sale, and by way of surplus, how essentially useful and encouraging must a home-plot be to a cottager, in order to supply his family with vegetables and roots, even if he should have little to dispose of!

About Reading, there are nearly forty acres in gardenage, exclusive of private gardens, and some pretty extensive nurseries. The soil a rich loam and sand, excellently adapted for horticultural purposes.

Large quantities of onions are raised about Reading, which are in great estimation; and the asparagus beds contribute to the supply both of London and Bath. For asparagus the soil is peculiarly favourable.

The nurseries are not inferior for management and extent to any in this part of the kingdom.

In the vicinity of Newbury, many acres of land are devoted to horticulture. They are occupied by market gardeners, who carry their commodities to the towns within a great distance, and deal pretty extensively in seeds. All kinds of vegetables are plentiful and cheap about Newbury. Large quantities of potatoes are raised for sale in the fields; the gardeners contracting with the farmers for a year's use of the land, for which they pay a handsome rent.

Maidenhead has one or two extensive nurseries, apparently well filled and managed, exclusive of its proportion of gardens, both private, and for the production of vegetables for sale. In the garden of the Sun Inn, at this place, I saw a particular kind of cucumber, to which the gardener gave no appropriate name, though it seems to be a variety of the green Turkey. It frequently grows to the length of a foot, and is smooth, straight, and fleshy.

The gardener sows in hot beds about the 5th of January,

nuary, and has fruit fit for use in March. On the 4th of September in the open air, but on original hot beds, I noticed some fruit on the same stalks fit for slicing and pickling, and some of extraordinary size standing for seed. To the admirers of cucumbers, if any such now remain, this information will probably be interesting. Any guest at the inn, for a trifling compliment, may have a sufficient quantity of seed to propagate from; but it seems that, in proportion as melons have become a fashionable object of luxury, cucumbers have been falling into neglect and disuse. They are certainly of too cold a nature for this climate, and I cannot censure the prevailing taste.

In the Vale of White Horse are many pretty considerable apple, and several pear orchards, particularly where the soil is deep and adapted to the nature of this valuable fruit. Little cyder, however, is made, nor are the orchards managed with that degree of skill and attention which is seen in some of the apple counties. The object here is to raise a good kind of eating and keeping apple, or one fit for domestic use. The best sorts are generally sent to London, either by the Thames navigation, or in waggons.

In the upper part of the county, likewise, apples and pears are cultivated pretty generally in favorable situations; and though the orchards are seldom large, when the fruit hits, as it is termed, a poor man will sometimes raise enough to pay his rent, besides saving a part for himself.

On the Chalk district, the gifts of Pomona cannot be expected to be liberally bestowed. A loamy clay soil is undoubtedly best adapted for apples and pears.

In the Vale of the Kennet, the soil is generally too light for this kind of fruit. After the trees have been planted

planted about Newbury for a few years, their trunks become cankered and unhealthy, and the branches gradually decay. "It is only," says Mr. Bicheno, "within these three or four years that the American blight, as it is called near London, has committed any ravages on the apple trees among us." This pest, which is of animal origin, has already extended as far as Oxford, and perhaps much further.

About Wantage, with a proportion of apple orchards, they have likewise cherry orchards. Cherries, indeed, are among the principal fruits produced in this county; but however grateful they may be to the palate, and however profitable in a good year, where there is a ready sale, they are much less to be depended on than apples. "I would not give one good apple tree," said a poor fellow, one of my parishioners in Hurley, "for ten cherry trees. I can keep apples till they are wanted for sale or use; but cherries will burst or drop, if they are not gathered when ripe, and we are not always certain of a market for them." They suit, however, a great variety of soils, and are cultivated abundantly about Coxwell, the Hagbournes, Blewbury, Hurley, and many other places. According to the situation, they are sent to Bath, London, Oxford, &c. About the Hagbournes they are found to be very productive. The May dukes and the heart cherries are in most estimation. During the season, many persons make a living by gathering and selling this kind of crop.

A composition of lime and night soil laid on young cherry trees with a brush, is found to promote the growth of them wonderfully; and it is said to have the same effect on apple trees.

Cherries are chiefly eaten in the dessert, or infused into brandy, particularly the black hearts. They are not

not considered as a very wholesome fruit in any state; and manufactured with brandy, they must inevitably be injurious to health.

The gum exuding from the cherry tree is not inferior to gum Arabic, and might, in hot weather, be collected with advantage. The wood is hard and tough, and is valuable to the turner and to the cabinet maker. It is sometimes stained to imitate mahogany.

As apples are cultivated chiefly for sale, or for domestic use, the best method of preserving them may be useful to be known. Gather them when the trees and fruit are quite dry, and sufficiently ripe. The best time of the day is from eleven to four. Take care not to bruise them; put them, when gathered, into a dry place, to sweat for about a fortnight: wipe them carefully, then lay them on clean straw two or three layers thick; but if there should be a scarcity of room, several more layers may be laid one upon another, and the whole covered with dry straw a foot thick, to exclude the frost and damps.

The wood of apple trees is tolerably hard, and turns very clean. The orchards in which apples and cherries are planted, are generally in grass, and mowed or fed. Sometimes, however, they are tilled in the garden style, or by means of ploughs. Mr. Hopkins, of Milton, near Abingdon, has made a plantation of apples and cherries, extending over twenty-one acres. This is the largest in the county I recollect having heard of. In this space 540 trees only are planted; and part is plowed, and part in grass.

Were more attention paid to orchards, they would be found extremely productive, provided the kind of fruit trees were judiciously adapted to the soil. But whatever would tend to draw off the farmer's regard

his corn crops, could scarcely be considered as a benefit to himself, or to the community. The cottager, however, might advantageously be allowed his little orchard, as well as his kitchen garden.* This is indeed frequently the case in the upper part of the county, and I could wish it were more generally so throughout its whole extent. The annual expence of fruit trees is but trifling, the profits are sometimes immense. On such casualty crops, however, it is impossible to enter into calculations. If there is a full crop once in five years, and an average crop once in three years, it is as much as can fairly be expected.

* At Wytham, in the vicinity of Oxford, the culture of strawberries is found very productive. The soil seems to be well adapted for them, and the convenience of a near market, and sure demand, keeps up the exertions of those who have appropriated their gardens to this produce.

CHAP.

CHAP. X.

WOODS AND PLANTATIONS.

IT is an observation confirmed by universal suffrage, that in every part of the island the quantity of standard timber has been diminishing most perceptibly within the last half century. The facilities which canals and navigable rivers afford for the general use of coals, may have rendered under-wood in many places less valuable; and from the increased demand for corn, coppices have probably been grubbed up, and the land turned into aration on consistent principles; but why forest timber should be neglected to be planted, or what existed, to be devoted to the axe, must be ascribed to causes in which prudence had no share, and policy was disregarded.

Oak, elm, and ash, within the last twenty years, are nearly doubled in price; yet this has not operated in favor of new plantations, in any degree equal to the consumption of the old. The cause is obvious, and nothing but legislative authority can check the evil. When neither the interests of descendants, nor the public welfare, have any effect on the conduct of proprietors of woodlands, it is time that the controul should be delegated to other hands, and that the sanctions and inflictions of laws should be called in as auxiliaries to produce what a sense of duty fails to do.

On private estates in general, no sooner is a difficulty

felt, or an incumbrance to be wiped off, than the axe is applied to the patrimonial groves, and the fond hopes and prudent cares of a virtuous ancestry are sacrificed to some temporary accommodation of their posterity. It is nothing unusual, indeed, for a father to join his next heir, even when estates are entailed, and waste cannot be safely committed by either singly, in cutting down timber, and dividing the produce, in order to support their respective extravagance and love of dissipation. But no sooner does a young man come to the possession of his estate, than he commonly strips it of its woods; and lets in the light, as it is termed, on his native mansion, in order to discharge the debts he has often wantonly contracted. A law, therefore, to restrain any person from cutting down trees, not arrived at perfection, and to oblige him to plant two in a suitable situation, in the room of each felled, could neither be arbitrary nor unjust. Or if this plan should be objected to, a heavy tax, *ad valorem*, should be imposed on the seller of timber below a certain size, and to increase with the magnitude of the fall within a limited number of years.

But if the pressure of the times, and the necessity of keeping up appearances in young gentlemen, with moderate allowances, before they come into possession of their estates—if large expences, families, and a wish to provide for the younger branches of them, should be allowed as legitimate pleas for private persons cutting down timber to a disadvantage, or improperly, what excuse can be made for the neglect of public property—of royal forests and woods, which have justly been considered as nurseries of timber for the navy, and a sacred deposit which should not rashly be touched, or improvidently managed!

When

When I advert to the state of Windsor Forest, which alone falls within my survey, I hope I shall not be guilty of obtrusion or indecorum, in any remarks which I am officially called on to make. The inclosed lands belonging to the Crown, including woods and water, amount to 5,454 acres 2 roods 6 poles. These, partaking of the nature of private property, are managed in the best manner; and the improvements which have been made on them are truly worthy of a patriot King, and the zeal and attention of those to whom his Majesty has delegated any part of the trust of superintendance and direction.

But the open forest land, including heaths and water, comprising no less than 24,519 acres 2 roods 38 poles,* from the right of commons, which is too frequently sy-

* The other divisions of Windsor Forest are: encroachments about 600 acres; private property 29,025 acres 2 roods 36 poles, making in all an aggregate of 59,600 acres.

"The Forest is under the government and superintendance of His Royal Highness the Duke of York, lord warden, who appoints his deputy lieutenant, the rangers or head keepers of the several walks, and the under keepers.

"The powers of the chief justice in Eyre are fallen into total disuse, and the lord warden now exercises all the controlling powers in his civil character, as the immediate representative of the King. The surveyor general of the woods manages and disposes of the timber, under the authority of the lords of the treasury.

"The exercise of such rights of commoning as still exist in the Forest, is much abused by overstocking, to the great prejudice of the King's deer, many of which die every year for want of sustenance.

"The state of the Forest, in respect to the manifold innovations practised in every department, has called forth legislative interposition, and the subject is most likely to go again before parliament for increased authority, to place the rights of the crown and the subject within prescribed bounds, for the uninterrupted enjoyment of their respective interests."—JOHN SECKER, Esq.

nominous

nonimous to the right of trespass, in its present state, bids defiance to rational improvement; and must remain unproductive or useless, till some means are adopted of separating private from public claims, and throwing them respectively into severalty.

"The major part of the timber is old and decayed. Some of the trees indeed are in an improving state; but most are at their full growth. Upon a conjectural estimation, the whole of the timber in the Forest, of every description, is supposed to be worth near 200,000*l*."

I have every reason to believe that my informant is correct; and I have only to observe, that one tenth of the land, properly planted and secured, would produce timber to a greater value, and of a superior description, to the whole under existing circumstances. In passing through Windsor Forest, which in point of local beauty yields to none, and where a great part of the soil is favorable for the production of oak, and other valuable kinds of trees, it is really painful to see the sapling topped, the venerable standard denuded of its branches by time or violence, a scanty herbage, and a miserable stock, where corn might wave, and future navies grow.

To encourage the growth of timber, it would probably be equally politic to propose rewards, as to hold out penalties for its premature destruction. And, in order to render rewards most effectual, they should be both of a public and a private nature. If the planter of any given quantity of trees on his own estate should receive a premium from government, it would be his duty in return, to encourage the tenant who planted or reared trees on his farm. The union of different interests alone can accomplish this national object, which the circumstances of our situation render daily more important.

I would even propose, that in every lease of lands, the

the tenant should be bound, on liberal conditions, to plant or manage a certain quantity of timber, from which he was to derive an advantage proportionate to his success and his care. In every parish, and almost on every farm, there are spots of land now totally useless, which might be advantageously planted with trees. A generous and enlightened proprietor of land will not always calculate on what will yield a profit to himself; he extends his views to posterity, and anticipates its praise for his services. He will consider the plantations he has reared as monuments of his fame, and as sources of wealth to his country and his family. Influenced by such considerations, selfish views will be absorbed in patriotic exertions, and man will blush to have it thought that he has lived for himself alone.

At present, trees are chiefly confined to hedge rows, where certainly they are most injurious, and are least likely to meet with protection. Or if separate plantations are made, for want of due fencing, they are frequently exposed to the ravages of men and of animals, and not half of them come to maturity. To these general remarks, however, which apply to the kingdom at large, there are many praise-worthy exceptions. The woods of several gentlemen of this county in particular, are extremely well managed; and it is only to be regretted that a spirit for planting has not more extensively prevailed, where it might have been exerted with advantage.

It must be confessed, indeed, that there are many checks and hindrances to planting trees, from the peculiarity of tenures. A lease-hold, a life-hold, all that belongs to the church and to corporations, or, in other words, whatever is in mortmain, will commonly be ill wooded and unimproved.

"In

"In church leases," says a sensible remarker of this county, "there is frequently a covenant to reserve the timber. The lessors pay no regard to its preservation, and the community frequently suffers from this valuable article, belonging as it were to an unknown tenant always in reversion. I never saw a church estate well timbered, where the timber belonged to the church."

The best wooded tracks in Berkshire, exclusive of the Forest, are to the south of the Kennet, several parishes on the north, and along the banks of the Thames, at intervals, and some miles interior, from Streatley to Cookham, where there are entire woods of beech. Bagley wood,* near Oxford, likewise deserves to be particularized. Except in hedge rows, or in parks, the greatest part of the standard trees grows in those districts. The whole quantity of wood land exceeds 30,000 acres, and its average value is as many guineas per annum.

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1. FOREST TREES.

Oaks.—On all the strong loams, clays, and sour lands of Berkshire, of which there is a large quantity, the oak will thrive luxuriantly; but, except in hedge

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* Bagley wood is one of the largest in this part of the county, but it is not rendered so productive as it might be, under a better system. It belongs to St. John's College, Oxford, and is extra parochial, but commonable to the parishes of South Hinksey, Radley, and Sunningwell, as well as the adjacent chapelry of Kennington.

There are nine inclosed coppices, one of which is divided into two parts, and they are cut once every ten years.

The open part of the wood produces oak chiefly, of an excellent quality.

rows,

rows, parks, and mixed with coppice wood, there are few native woods or plantations of this estimable tree. The finest oaks, in any number, are to be seen in the Forest, and on the south of the Kennet. In Hampstead Marshall Park, about seven years since, some were cut down which sold for 60*l.* and 65*l.* a piece. Evelyn, in his "Sylva," mentions some remarkably fine oaks in Donnington park, near Newbury, and regrets that so valuable a kind should be lost. It is not probable, however, that they were of a different species; but from the favorableness of the soil, and their age, which tradition fixed at 300 years, they had become very large in their dimensions, and close in their grain. Certain it is, that no oaks of any great value now grow there, their place being chiefly occupied by the elm, and a few beeches, with very patulous branches.

About Sparsholt are some fine oaks. At Milton some oak plantations; and at Radley and in Bagley wood they flourish extremely. The greatest part, however, are confined to coppices, which generally contain a sprinkling of them. In some few places the coppices are entirely composed of them.

I saw good oaks in some places in the Chalk district, which shews that they may be raised in very various kinds of soils. As they are slow growers, however, and a tree 75 years old will seldom yield more than a ton of wood, though at double that age it will contain seven or eight tons, the return is so remote, that private persons require some stimulus to plant them. Add to this, the demand for bark, whose value is yearly increasing, and which is most valuable on trees that are young, and then it will not appear extraordinary, that even where they have been planted, they are cut down before they reach maturity. In short, parliamentary regulations

regulations are indispensably necessary to promote the culture and preservation of a tree which sees several generations pass away, before it arrives at perfection.

Elm.—This tree is principally confined to hedge rows, and is too frequently shredded,* to the manifest injury of the proprietor, though no doubt profitable to the farmer.

In parks, however, and where they are protected from the bill and the axe, they frequently attain to a great size. Round Newbury they flourish very much. "On the estate of the late Sir Joseph Andrews, a few years ago, elms were cut that measured from 17 to 20 feet in circumference, at one foot from the ground, and running in a proportional size to the height of 30 or 40 feet. This is below rather than above their measurement. From the number of concentric circles, they appeared to have been planted about 130 years."†

The wych elm, a variety of the common elm, is not unfrequent.

Ash.—The ash is often found in hedge rows, but too frequently in a pollard state. Its leaves and shade indeed are unfriendly to vegetation; but from the value of its wood, it is entitled to more attention than it usu-

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* "In some parts of the Vale," says a remarker on the original Report, "this vile custom prevails; and to shew the evil of it, I know a parish where there are scarcely any large elms, all of them being lopped. By some accident or other, however, two elms which had never been lopped, were cut down, and had, if I recollect right, twelve or thirteen loads of timber in them."

"Planting trees in hedges," observes another, "is highly improper. They injure whatever grows under them, and occasion more loss than the timber is worth. In nooks, corners, pits, and other vacant spaces, trees may always be planted to advantage."

† Mr. Bicheno.

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ally receives. In many situations, it is a very profitable tree to plant.

In young plantations, of which Mr. Loveden and other gentlemen have several, ash poles are cut, according to the use intended, every seven or more years. They are applicable to many agricultural purposes, and are found to be sufficiently profitable, though less so than willows and osiers.

Beech.—With the exception of hazle, beech is by far the most plentiful of any plantations in this county. For its production, the chalk soil is excellently adapted, and the proprietors of land in the upper part of that district more particularly, have availed themselves of the advantages it offers. The banks of the Thames, as far as the chalk extends, are frequently fringed with beautiful woods of beech, and to the distance of three or four miles inwards, we find some extensive plantations of this kind. Those woods which are most remote from navigations are drawn and applied principally for home purposes, and for firing. Such as offer facilities for conveyance to London, are cut into planks, &c. and sent to that great emporium, and are manufactured into chairs, bedsteads, coach fellies, &c.; besides immense quantities intended for firing. When cut into billet for fuel, they are worth from *1l.* 16*s.* to *2l.* 2*s.* a load. A foot worth *7d.* makes four faggots; and a score is sold about Streatley, Pangbourne, and other places, for *3s.*

About Hurley, and the same may be said of the other beech woods, they are not felled regularly; but as it is found advisable to cut some annually, they are generally apportioned according to their growth, and a part cleared of all the trees that appear sizeable. On an average, they net about *1l.* per acre annually.

The

The beautiful beech woods belonging to G. Vansittart, Esq. of Bisham Abbey, are thinned, or drawn, every ten years. When about thirty-five or forty years old, they attain a very respectable size. The largest only are cut. I was informed by Mr. Stone, of Basildon, that beech cut in that neighbourhood for timber, will contain twenty feet of timber and upwards; and lower down the Thames, the soil seems still more propitious for their growth, and therefore, it may be presumed, they are still more profitable.

The beech woods are generally well managed.

Alder.—This wood, though not much valued in most places, about Newbury is of considerable importance. It serves to plant the bogs, where little else would grow, and at the same time encourages the vegetation of herbage, of which the horse seems fond, though probably from the want of better.

The alder furnishes handles to rakes, prongs, mops, besoms, and to every other utensil used by the husbandman and housewife. Many hundreds of dozens of prongs and rakes are annually sent from the neighbourhood of Newbury into the west of England. At eight, or at most nine years growth, the alder is convertible to those purposes.

Spanish Chesnut.—I mention this valuable tree merely to encourage its planting. In point of value and utility, it is only inferior to the oak, which it will even exceed in longevity. The Tortworth chesnut is proved to have stood ever since the year 1150, and appears then to have been remarkable for its age and size. The wood of this tree is extremely durable: some of the oldest buildings in London are said to be timbered with it.

I noticed some fine trees of this kind at Kingston Lisle, in the parish of Sparsholt. A rich loamy soil suits

suits it best. How many fine situations then does Berkshire present for its growth!

Walnut.—Of this tree there is a great deficiency in every part of the kingdom, though it equally invites cultivation by its fruit and the value of its timber. I am unable to indicate in this county any considerable number of trees of this kind; but though it thrives best on a rich loamy soil, it will grow very well on strong ground, if the staple be chalk. Hence the prospect of success which would attend its being planted here.

The wood has long been in great demand for gun stocks. It will sell for as much or more by the foot as the best oak.

The fir, the larch, the sycamore, the lime, the horse chesnut, the plane, the poplar, and various other trees, are chiefly to be seen in ornamental plantations, or round gentlemens' seats, and therefore require no further notice.

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2. HASLE, AND COPPICE WOOD, &c.

In places at any distance from navigations, coppice wood is an object of importance for fuel, as well as for various other useful purposes. On the Berkshire downs the hazle is the most common tree or shrub, as it will thrive on the most arid spots, and form a hedge where white thorn cannot be reared; and exclusive of its utility in these respects, it is convertible to numerous purposes, and enters into the composition of almost all kinds of underwoods.

The coppices in Berkshire are frequent in almost every part, and some of them extensive. According to soil and situation, they are cut at longer or shorter intervals, and produce more or less money.

On

On the downs, they usually stand from ten to twelve years, and then will not sell for more than from 6*l.* to 9*l.* per acre.

At Witham they are cut every ten years, and yield about 10*l.* per acre.

At Radley, where the soil on which they grow is richer, they are fit for use in nine years, and produce 12*l.* per acre.

At Cookham, and other neighbouring parishes, they are cut every seven years for hoops, hop-poles, stakes, hurdles, &c. and produce, when manufactured, considerable sums, besides furnishing employment to numerous hands.

In other parishes, where there are considerable portions of underwood, and the soil favorable, the coppices are cut in seven or eight years, and yield, on an average, 1*l.* per acre, and sometimes more.

In the Vale of the Kennet, the trade in coppice dealing is considerable. The demand for hoops and brooms, which are sent in large quantities to London, has furnished a staple employment for the poor in winter, especially in the vicinity of navigations.

In 1794, Frederic Page, Esq. of Newbury, thus states the hoop trade:

Names of hoops.	Number in each bundle.	Price. s.	d.
" Middling	120	7	0
Long pipe	do.	6	0
Short pipe	do.	5	0
Hogshead	do.	3	0
Barrel	do.	2	0
Kilderkin	180	2	6
Firkin	240	do.	
Long pink	320	do.	

Short

Hoops.	Number.	Price.
Short pink	320	2*s*. 6*d*.
Tumbril	480	do.
Bottle	do.	do.

"From Aldermaston wharf, where this trade is principally carried on, the freight is fivepence per bundle, which is paid by the seller.

"The hoops are made of willow, ash, and hazle. Birch is sometimes used, but this is more profitable in brooms, which are sold to the dealers in London by the load, of sixty bundles, twenty bundles of which are called stable, and consist of one dozen in each bundle; twenty twopenny, two dozen in each; and twenty common, two dozen each. The price of a load this year is five guineas, the freight one guinea."

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3. WILLOWS.

For the most part, the numerous willow tribe are aquatics; and if planted in wet and marshy situations, their foliage is found to increase the purity of the air, a powerful argument, independent of the profit they yield, for cultivating them as extensively as possible, where putrid miasmata are apt to generate diseases.

It is a trite proverb, but a true one, "that a willow will purchase a horse, before an oak will find him a saddle." This belief is so generally acted on, that we find the proprietors and occupiers of land planting willows, at a considerable expence, on land which was probably a mere bog before; and they are well rewarded for their pains.

The willows most commonly cultivated are the crack or snap willow, the white willow, and the Dutch willow. For upland situations, the yellow and the red

willow

willow are best; but an adaptation to soil and situation is not always regarded, from an inacquaintance with the distinctive qualities of the different species.

Pollard willows, since they have been manufactured into ladies' hats, have sold from 2*s*. to 3*s*. 6*d*. a foot. On the wharf at Lechlade, I observed many trunks lying, in order to be carried to London for that purpose.

But the value of willows little depends on this fanciful trade. For laths, gates, hurdles, poles, &c. they are of vast consequence in the business of a farm. The poles are usually cut when seven or eight years old, and, if thinned out properly the first or second year, will be worth from 1*s*. 8*d*. to 2*s*. 6*d*. a pair.

They are propagated by sets of different lengths, from four to ten feet; but the best way is to lay poles of about eight years growth, and which will be from sixteen to twenty feet long, in suitable situations, and to cover them at intervals with turf or earth. In the spaces where they are exposed to the air, they throw out shoots freely, which grow to the length of six or eight feet the first year, and are cut and sold to the basket makers. Perhaps they are always most profitable if cut annually. This kind of horizontal planting improves the vigour of the shoots, and is successfully practised by Mr. Tull, of Chamber House, and some few others.

The Rev. Mr. St. John, and other gentlemen near Oakingham, have another method of propagating willows. Where trees of this kind are too thinly planted, they bend down, notch, and peg the poles on each side, and then cover them, as in the preceding mode, with mould or sod. The result is similar.

Osiers.—Of all the willow kind, the osier, or *salix viminalis*, is the most profitable, and it is cultivated here with

with a degree of care and success unknown in any other part of the kingdom that I have heard of. Since the finer kinds of basket work have been in fashion, the demand is considerable, and the commodity is likely to maintain its price.

Along the banks of the Thames, and on its islands, are numerous osier beds, and in every suitable situation, though not close to the river, plantations of this kind are becoming an object of attention. Mr. Loveden, and many other gentlemen, have planted considerable quantities of osiers, and find them extremely productive; but it is chiefly on the Kennet and the Loddon, that the management of the osier beds demands particular notice.

On the latter, says Mr. Nicholls, "an improvement in the appropriation of the wet and low parts of the meadows has lately been adopted to a considerable extent, which is to dig and plant such parts with osiers. The sward, for this purpose, is turned in one spit deep, and planted with foot sets in the usual method, in February and March. The expence of digging, planting, purchasing, and cutting the sets, amounted to about 14*l.* per acre; and if the plantations are kept clean hoed, the clear produce after the first year will average about 8*l.* per acre per annum, if the price continues as high for the rods as at present, which is not very probable, from the increasing plantations.

"The sorts are the yellow Spanish osier, the French for fine work, and a variety of the latter, known here by the name of the New kind, which grows nearly to the size of the Spaniard, and is exceedingly tough and useful."

Along the line of the Kennet, particularly about Aldermaston, Wasing, Woolhampton, Brimpton, and

Thatcham, there are very extensive and well managed osier beds, chiefly planted where the peat has been dug out. The expence of levelling and planting will cost about 20*l.* per acre; and if hoed six times a year, which is the practice of Mr. Tull, the expence will be two guineas per acre annually, while the produce will be from 12*l.* to 15*l.*, sometimes more, from which rent, however, is to be deducted. It is found that osiers thrive best where the beds are sufficiently moist, but not liable to be long under water. Not a weed is to be seen in the plantations of Mr. Nicholls, Mr. Tull, and others, who follow the improved modes of culture.

The proprietors sell the osiers to the whiteners, who employ many hands during the spring in preparing them for the basket makers. They are made up into bolts, and the greatest part is conveyed by the Thames to London.*

Furze.—On several of the wastes and commons we find furze, and in a few places it is private property, and cut for fuel or heating ovens, periodically. Pusey Furze is the most extensive of any in the county. As a shelter for game, furze is frequently sown.

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4. NEW PLANTATIONS.

Though more wood is certainly cut down than is planted in general, this reflection by no means applies to all. Many gentlemen in this county are raising young plantations of trees, which beautify their estates,

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* The stripping and whitening of osiers, vernacularly called rods, occupies the women and girls usefully in the spring. They are paid at the rate of 2½*d.* per bolt, the measure of which is forty-two inches girt, fourteen inches from the butts.—S. Nicholls, Esq.

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and will enrich their posterity. It is impossible to mention every instance of this kind which I witnessed in the course of my survey.

Mr. Loveden's plantations, entirely his own work, occupy about 200 acres, and produce chiefly ash poles, cut every twelve years, while the avenues are lined with oaks, firs, larches, beech, birch, &c. tastefully intermixed; and rising, though only about twenty years growth, to a respectable size. He has lately planted many additional acres with larch and fir.

In the neighbourhood of Oakingham, the Rev. Mr. St. John, and F. Palmer, Esq., are great planters of oak, elm, &c.

Since the enclosure of Stratfield Mortimer, many firs have been planted, which thrive well, on that poor heathy soil.

About Lambourn, Mr. Hippisley is likewise raising plantations of firs; but a chalky soil is by no means propitious to their growth, and beech or underwood would probably have answered better. Mr. Mount, of Wasing, has fir, and other plantations, which grow luxuriantly. For all the heath lands, except in the gullies or bogs, the Scotch fir is excellently adapted. In Dr. Beeke's garden, at Ufton, which was taken from the waste about twenty years ago, I noticed some beautiful Scotch firs and larches, equal in magnitude to any, on a calcareous soil, of double the age.* "Consult the genius of the soil in all," is a precept that cannot be too often repeated!

* On the authority of Mr. Frost, his Majesty's Bailiff, I beg leave to recommend trenching the land for plantations of firs and other trees, instead of digging small round holes. This is practised in Windsor Great Park with the most beneficial effects; as some trees planted in this way about eight years ago, are almost equal in size to others managed in the usual mode, which have stood twenty-three years.

CHAPTER XI.

WASTES.

THOUGH Berkshire may be considered as a well cultivated county, the wastes are by far more extensive than in others which are infinitely behind it, in their general agricultural improvement. Including the sheep-walks, on the chalks hills, chiefly uninclosed, and which amount to about 25,000 acres, the whole quantity of land, in a comparatively unproductive state, cannot amount to less than 60,000 acres, or nearly one-sixth of the whole area.

The forest of Windsor, Maidenhead thicket, Bulmarsh heath, and many smaller wastes, the downs from Ilsley to Ashbury, and a track of common and waste lands, beginning at Inkpen, about eight miles to the south-west of Newbury, and running east, with a few intermissions, as far as Windsor forest, of the breadth of two or three miles, and forming the Hampshire boundary, are incontestable proofs of what still remains to be done, in order to render Berkshire as rich, fertile, and productive as it might be made.

With regard to the downs, however, I am not unaware that many intelligent persons think they ought to remain in their present state. "In the hilly part of this county," says a remarker on Mr. Pearce, "those lands which are looked upon as *wastes*, are in fact the very support of the farms, which every good husbandman there will

will acknowledge. They are fine healthy downs, which are occupied with the farms as sheep-walks, the limits whereof are as well known by the shepherds, and the common consent of the farmers, as if bounded by hedges. The business done at Ilsley market will pretty clearly demonstrate them to be the nursery for sheep. It is the decided opinion of the principal farmers in that neighbourhood, that the plowing such downs indiscriminately, would, after the first seven years, be the utter ruin of the farms."

That indiscriminate plowing, and solely with a view to a few plentiful crops, would be ruinous, will scarcely be disputed; but is it not possible by enclosing, and a judicious rotation of crops, to render the downs capable of supporting double the number of sheep, besides raising a considerable quantity of barley, oats, and in many places wheat? Farm houses might be erected in central situations, in order to facilitate manuring; or green crops might be plowed in, which already is no uncommon practice where the farm-yard is too remote, and is found to be a cheap and beneficial mode of manuring uplands. But in every case of this nature, leases must be granted for twenty-one years, as a precaution against the tenant's exhausting, instead of improving the land; and conditions, or covenants, adapted to situation, should be carefully inserted, and steadily enforced. While indeed the downs are chiefly used to enrich the land already in aration, and are thrown in, as it were, into the bargain, the tenant can have no interest in wishing to improve them, or to render them more productive; but the proprietor ought to be influenced by other considerations; and if he is even willing to forego his own advantage, he owes a duty to the public, by exerting himself, to render the supply

supply equal to the consumption of an increasing population.

Without pushing this argument, however, to any greater length, and admitting that the downs, in their present state, are valuable as sheep-walks, and that they ought to be broken up with caution, and managed differently from what they usually have been when cropped, it is presumed few will argue in defence of the wastes of another description in this county, some of which certainly have a much better staple than a proportion of the arable lands; and others might be advantageously planted with trees, particularly firs.

There is scarcely a parish, even among those which are enclosed, unless within the last age, but what contains portions of wastes, sometimes of an excellent soil, and always capable of being made more productive than at present. These small portions united would make a large aggregate; but till some unexpensive and easy mode of enclosing them is devised by legislative wisdom, and sanctioned by legislative authority, they must for ever be doomed to remain a loss to the proprietor and to the community, and a blot on the face of cultivation.

And if we extend our view to those larger wastes already enumerated, if we look at Windsor forest, at Maidenhead thicket, and at the long chain of commons and wastes, on the south eastern part of the county; if we at the same time take into our consideration the disadvantages attending common fields and common meadows, we shall be struck with astonishment that such absurdities should ever have existed, or rather that they should have been suffered to continue so long, when it has been proved by the best authorities, that

even

even in the most favorable years, we do not raise a sufficiency of corn to supply the inhabitants; and that consequently more land must be brought into cultivation, or we run the risk of famine, from adverse seasons, or from obstructed commerce!

The value of corn imported in the following years amounted to, in

	£.	s.	d.
1800, - -	9,419,858	18	4
1801, - -	10,707,655	0	11
1802, a year of plenty,	2,855,092	5	8
1803, ditto, -	1,693,790	15	9
1804, average year,	2,305,705	18	7
1805, ditto -	4,917,878	0	9
1806, good crop -	1,937,608	19	0

Of the year 1806 it may be proper to give the particular imports.

Species.	Quantity.		At per quarter.		Value.		
	qrs.	*bu.*	*s.*	*d.*	£.	*s.*	*d.*
Barley	5385	5	36	6	10,367	6	6
Beans	3406	3	43	9	7,451	8	10
Oats	510,242	3	25	8	654,811	0	11
Peas	1,514	4	43	6	3,294	0	9
Rye	829	5	47	4	1,963	8	11
Wheat	318,916	7	79	0	1,259,721	13	1
				Total	1,937,608	19	0

Hence it is evident that the principal deficiencies are in oats and wheat,* and this may be obviated two ways,

* Though a popular clamour has lately been raised about employing sugar in our distilleries instead of barley, I still adhere to the opinion delivered, Chap. XII. article *Oats*, which was written some months before the parliamentary discussion on the subject. Even of barley, we do not produce

by employing oxen instead of horses in agriculture, and by enclosing and cultivating the waste lands, of which we have still about 6,000,000 of acres in England, and about 22,000,000 in the whole island. One million of acres out of the six which England contains, if brought into tillage, would render us independent of importation, and place the kingdom in a state of prosperity which it can never know, while its manufactures or its money go to purchase bread from foreign nations, which might easily be raised at home.

Common fields,* and the rights of commons, have ever been the most powerful bar to the improvement of the soil. As the latter, however, are regarded as a legal inheritance, they ought to be adequately compensated for, before they are taken away. But this value will be differently appreciated by different persons; and many will contend, and on very plausible grounds, that they are rather an injury than a benefit to numbers of those who most strenuously oppose a commutation of their claim. Wherever there are large wastes, and particularly near forests, the lazy industry and beggarly independence of the lower orders of people, who enjoy commons,† is a source of

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produce sufficient for our consumption; and are the people to be starved rather than the farmer should risk a shilling or two per quarter on the price of his barley, or he should be obliged to vary the quantity of his different crops, which the public welfare imperiously demands?

* See Chap. VI.

† From my memoranda, taken on the spot, I beg leave to insert the following under Windsor Forest and its purlieus.

Much heath land and commons, turf, and some peat. From the facility with which the poor obtain fuel and mere subsistence, they are too frequently idle. In fact, they want a stimulus to exertion. Commons sometimes benefit the prudent and industrious, but they are generally injurious to the public as well as to individuals. The miserable breed of

misery to themselves, and of loss to the community. Better would it be for them to receive a private allotment, however small, in lieu of their boasted public rights, and to employ their time in productive labour, which is now so frequently wasted on objects unworthy their regard, or incompatible with their duties. I could wish to see them, however, not only treated with equity, but with liberality, and that what they received should be more valuable and more useful than what was surrendered up. My object would be, to raise comfort on the basis of industry, and to make plenty precede, not follow, an increasing demand.

The arguments and deductions of Mr. Pearce, on the subject under consideration, I adopt without reserve. The lapse of fourteen years has not materially altered his data, though it has rendered his estimates of value too low.

"In a national point of view," says he, "it matters not by whom the land is cultivated, so as the produce is brought to the community. Following that idea, I will subjoin a comparative statement of the present produce of the waste and commons, with what it would be after being enclosed a few years.

"The 40,000 acres of waste* in Berkshire, in its present state, yields hardly any thing to the community: the miserable keep a horse, cow, or sheep gets on most parts of it, in no direct way returns one penny to

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of cattle, horses, and sheep, attest the poverty of the soil, and the evils of overstocking. The animals may possibly live, but they improve little. The profit by keeping them must therefore be small

* Though a considerable number of enclosures have lately taken place, and the wastes and commons have in consequence been reduced, I do not imagine that what might still be called unproductive land, is at all over-rated by Mr. P.

the

the state; but that my calculation may be deprived of any partiality, I will suppose each acre produces, by some means or other, to the community, an annual produce of 5*s*. the amount on the whole therefore will be 10,000*l*.

If the said 40,000 acres were enclosed, in a few years it would have a return from it, at least equal to what I shall here state.

	£.
8000 acres in wheat, at 20 bushels per acre, and 5*s*. per bushel - -	40,000
10,000 in barley, at 30 bushels per acre, and 3*s*. per bushel - - -	45,000
1,500 for oats for horses employed in agriculture only	
14,000 of turnips, clover, &c. 2*l*. 10*s*.	35,000
6,500 meadows, exclusive of what the labouring horses consume, at 2*l*. 10*s*.	16,250
Annual value of produce from wastes, &c. in Berks - - - -	136,250

"By the foregoing statement, there appears a produce, worth upwards of 125,000*l*. per annum lost to the small county of Berks only. But let the reflection be carried still further, by considering that bread and beer corn, sufficient for 30,000 people, might thus be created, and also an increase of work that would give full employment to every individual, that is now taxing the landed interest for support.

"Combining, therefore, the advantages that may be effected from the cultivation of the waste land, with those I have already recommended, it is not hyberbolical to assert, that Berkshire has immediate resources within itself, sufficient to support and employ an encrease of nearly one-fourth of its present population."

This

This unadorned and unexaggerated statement speaks sufficiently for itself. If the proprietors of land, not only in this county, but in the kingdom at large, can contentedly sit down with the loss of one-fourth part of the revenue to which they are entitled, the reporter would feel himself impertinent in disturbing their repose; but if raising provisions for two or three millions of more people, besides feeding and employing from our own resources the existing population, should be considered as of any magnitude, in a national point of view, he trusts to be excused for the warmth with which he advocates the cause of his country and his fellow subjects, by urging the allotment and cultivation of wastes and commons, wherever they are to be found. And if instead of throwing them to farms already too large, part were assigned to cottagers, and part divided into new farms, of a moderate extent, on beneficial leases of three lives renewable, or 99 years certain, the progress of improvement would be accelerated in a tenfold proportion to what it has hitherto been; smiling villages would rise where desolate heaths now tire the eye, and poor rates, which threaten to overwhelm us, be claimed only for the support of infancy, sickness, or age, as originally intended by the act of Elizabeth.

IMPROVING WASTES, &c.

On this head I shall be brief, because it is necessary wastes should be apportioned and in severalty, before any rational plan of improvement can be adopted.

It is well known that an intimate mixture of different simple earths is necessary to vegetation. The principal

cipal in this county, to which I restrict my observations, though they may be applied generally, are chalk, clay, and flint: the latter chiefly in the form of sand. Neither of these earths, separately, answer the purposes of agriculture; but on their due admixture the fertility of the soil depends, and therefore in every scheme of melioration, what is wanting should be added, what is superabundant should be withdrawn. If clay prevail, chalk and sand should be added, or something which will answer the same purpose. If the soil be sandy, clay becomes useful, and marl will be the best possible ingredient. This will be properly illustrated by an example recorded by Dr. Alderson.*

"An ingenious man having obtained a grant of some waste sandy land, which till then had been wholly unoccupied, was allowed to enclose as much as he could cultivate. He found near the foot of a hill a stratum of clay, with which he covered the first year an acre of sand, and then sowed it with grass seeds. These succeeding, he followed up his plan year after year, till he formed a complete surface of grass on many acres, which, plowed up last year, produced him nine quarters of oats per acre. This land, which but seven years ago, would not have maintained a single sheep, became fertile, and of considerable value."

This mode might be profitably pursued on the wastes and commons towards the Hampshire border, where veins of clay are not uncommon, though sand and heath prevail.

In regard to the heath lands in that direction, Dr. Beeke shewed me how easily and successfully they

* See an excellent pamphlet on the improvement of poor soils, by the Doctor.

might

might be reclaimed. In the vicinity of the village of Ufton, and indeed over some thousands of acres round the Forest, the staple is scarcely an inch deep, before we come to small stones and gravel. But by paring the turf off, burning it, and spreading the ashes over the ground, and then nine-share plowing it, and sowing with grass seeds, and harrowing in, the turf becomes sweet, good, and productive, and the heath which originally covered the ground disappears.

He has various other modes of reclaiming heath land. He sometimes plants potatoes in ridges, in the Irish way, which produce good crops, and render the soil fit for other purposes; and he finds that turnips sown among grass seeds not only increase the herbage, but also meliorate the soil. This learned and ingenious gentleman is likewise of opinion, and facts, as far as trial has been made, confirm it, that fir plantations, &c. would not only thrive well, but by increasing the staple from the decaying vegetable matter, render the most barren wastes in this tract fit for corn, which, however, ought never to be attempted to be raised in the first instance, where the soil is naturally poor. By committing this mistake, and by making the end precede the means, well grounded objections have been started against plowing up wastes and commons, which under a judicious system, might have well repaid the labour and expence.

CHAP.

CHAPTER XII.

IMPROVEMENTS.

AT the head of improvements, in this county, and perhaps in the whole kingdom, deservedly stand those made by his Majesty in Windsor Great Park, which will remain a monument of perseverance, judgment, and patriotism united, when the memory of more splendid, though not more useful undertakings, are to be seen only in the page of history, or probably may be consigned to oblivion. That a great monarch should condescend to honor the peaceful and unostentatious pursuits of agriculture by his example; that he, whose mind must have been incessantly engaged in the conduct of weighty affairs, should find both leisure and inclination to attend to the improvement of a royal and favorite domain, and by the introduction of the most beneficial practices, should lead his subjects, as it were, to their adoption, with the benevolent design of promoting their interest and welfare, are circumstances almost unique in the lives of kings; and confer a degree of fame which envy cannot tarnish, and of self congratulation, that must be without allay. Like Cyrus to Lysander, who admired the tasteful arrangement of his trees, walks, and borders, his Majesty may say, "this is all my own doing, the design was mine, I marked and

and measured out the walks and rows, and many of the trees I planted with my own hands."*

In order to exhibit a connected view of the capital improvements to which I refer, I beg leave to copy Mr. Kent's communication on the subject to the Secretary of the Society for encouraging Arts, Manufactures, and Commerce; and to this some notes are subjoined, explanatory of the present state of the farms, where variations or alterations have since taken place, with the substance of which I was favored by Mr. Frost, when I visited Windsor last autumn (1807).

"The thanks of the society were this session voted to Nathaniel Kent, Esq. for the following communication, and he was desired to make the due acknowledgments of the Society to his Majesty, for having been graciously pleased to permit so full and exact an account of the improvements of the farm in the Great Park at Windsor, to be transmitted to the Society, whereby so much benefit is likely to accrue to the public.

"Sir,

"Upon mentioning to you, some time since, that there had been some practices in husbandry on his Majesty's farms under my superintendence in Windsor Great Park, which I conceived were not generally known; and upon your giving me reason to think the Society for the Encouragement of Arts, &c. from its laudable desire to communicate to the public every thing that promises advantage to it, would not be unwilling to allow me a few pages in its next publication; and being indulged with his Majesty's gracious permission to state any matter that I may discretionally

* Cicero on Old Age.

judge

judge proper to communicate, I am induced to lay before you a few particulars, which some gentlemen and farmers, under similar circumstances, may, perhaps, think deserving notice.

"But before I enter upon any particular description of what I have to offer, it will not, perhaps, be uninteresting to the Society to know the grounds upon which his Majesty's large system of agriculture has been founded.

"In the year 1791, the Great Park at Windsor, about 4000 acres, fell into his Majesty's possession. It might truly be called a rough jewel. The whole, as a natural object, was grand and beautiful, of a forest appearance, but the parts were crowded and indistinct. The soil was various, some parts clay and loam, and some sharp gravel or poor sand; a great part of the former was covered with rushes and mole-hills, and the latter with fern and moss.

"About 1000 acres of the lightest part were separated from the rest at one extremity, and formed what is called the Norfolk farm; about 400 acres more at the other extremity, of a good loamy soil, were separated, and called the Flemish farm, both being named from the nature of the husbandry meant to be adopted upon them.

"The rest (about 2,400 acres) remains still in plantations and park; and though so much reduced, yet, from the improvements which have been made upon it, is now capable of carrying more stock than the whole 4000 acres did before. All the unsound wet parts have been drained by the Essex mode, so as to be rendered firm, and productive of an improved herbage.*

* Nearly 120 miles, computing by length, have been performed of turf

The mole-hills have been levelled chiefly by dragging, and the coarse and mossy parts fined by repeated harrowing and rolling (being one of the first improvements upon park-land of this description); besides which, a variety of beauty has been laid open, by clearing the valleys and low parts, to give a bolder effect to the woody scenes upon the higher ground, and by making judicious openings, so as to break strait lines, and separate parts that were in some places too heavy and samely; so that the same extent of land has now not only a much larger appearance, but exhibits a much greater variety of ground. The truth of this every impartial person, who knew the place before his Majesty caused these improvements to be made, must allow. I have only to add, that though prejudice may have taken up an idea that there has been too great a sacrifice of timber in effecting these improvements, truth will deny it. There has not been a tree taken down but what was either in decay, or removed either to give room for the growth of others, or to set them off to greater advantage in picturesque appearance.

"I come now to the object in view, as before hinted, which is to state the motives which I am inclined to think induced his Majesty to adopt the farming system upon so large a scale, and next to shew the result. These I conceive were chiefly to create useful labour for the industrious poor in the neighbourhood, and for trying experiments in agriculture, to excite imitation where success might encourage it.

"The Norfolk farm borders on that extensive waste

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turf draining, the best and cheapest of any on an adhesive soil, and which the experience of some years proves to answer every purpose.—*From the information of Mr. Frost.*

called Bagshot-heath, hitherto considered too barren for cultivation, though large tracts of a similar quality have been long since rendered useful to the community in the south-west part of Norfolk. Arable land of this description is generally managed there under a five-course shift; first, wheat; second, turnips; third, barley with seeds, which continue laid two years. But as the seeds turn to very little account after the first year, his Majesty's, which though a five-course shift likewise, of one hundred acres in a shift, is upon a much improved course of cropping; as thus—first, wheat or rye; second, the irregular shift; third, turnips; fourth, barley or oats; fifth, clover. The irregular shift, which is of great use on a light land farm, may perhaps want a little explanation. It is meant to be partly productive, and partly preparative. Forty acres of it are sown with vetches, to be fed off; forty are sown the latter end of August with rye, for early feed the next spring for the ewes and lambs; the remaining twenty acres are planted with potatoes, and the whole comes round for turnips the next year.*

"From the advantage of running sheep in the park, this farm has been brought surprisingly forward, considering the short time it has been cultivated; and a great part of it, which produced nothing but heath and moss, and would have been dear at five shillings an acre to rent, now produces crops worth more than the original fee-simple of the land.†

"Brevity checks from going further into a general

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* For the usual rotation of crops at present followed, see the Section on that subject, Chap. VII.

† Within the last ten years, the land has been improved to double its former value.—*Mr. Frost.*

description;

description; but the following particulars may deserve notice.

"The comparative advantages of the labour of horses and oxen have been for some time under the consideration of the public.* His Majesty has unquestionably tried the latter upon a larger scale than any other person, as he does not work less than 180 oxen upon his different farms, parks, and gardens, and has found them to answer so well, that there is not now a horse kept. Upon the two farms and the Great Park, 200 are kept, including those coming on and going off. Forty are bought in every year, rising three years, and are kept as succession oxen in the park; 120 are under work; and 40 every year are fatted off, rising seven years.

The working oxen are mostly divided into teams of six, and one of the number is every day rested, so that no ox works more than five days out of the seven. This day of ease in every week, besides Sunday, is of great advantage to the animal, as he is found to do better with ordinary keep and moderate labour, than he would do with high keep and harder labour. In short, this is the first secret to learn concerning him; for an ox will not admit of being kept in condition like a horse, artificially, by proportionate food to proportionate labour.

These oxen are never allowed any corn, as it would prevent their fatting so kindly afterwards. Their food in summer is only a few vetches, by way of a bait, and the run of coarse meadows, or what are called leasows, being rough woody pastures. In winter, they have nothing but cut food, consisting of two thirds hay and one third wheat-straw; and the quantity they eat in twenty-four hours is about twenty-four pounds of hay

* See Mr. Frost's statement, Chap. XIII. Sect. III.

and twelve of straw; and on the days of rest, they range as they like in the straw-yards; for it is to be observed, that they are not confined to hot stables, but have open sheds, under which they eat their cut provender, and are generally left to their choice to go in and out. Under this management, as four oxen generally plough an acre a day, and do other work in proportion, there can be no doubt but their advantage is very great over horses, and the result to the public highly beneficial.

"The oxen which are brought on in succession run the first summer in the park, and in the leasows and temporary straw-yards in the winter; by which temporary straw-yards I would have it understood, that they are made in different places, so that the manure which they make may be as near to the spot where it is wanted as possible.

The forty oxen which go off are summered in the best pasture, and finished with turnips the ensuing winter.* The usual way has been to draw the turnips, and to give them either stalled or in cribs placed in the yard, with plenty of straw to browse and lie upon; but last winter an experiment was tried, which answered extremely well, and will be again repeated next winter; this was, penning the oxen by day upon the turnip land, in the manner that sheep are penned, with this only difference, that the turnips were thrown up into cribs, instead of being left to be trodden into the ground; and in the nights they were driven into a yard, with a temporary shed well littered with rushes, fern, and leaves, and turnips and barley-straw given to them in cribs. They thrived very fast, and every one

* About fifty Carmarthen oxen are now bought in and fed off annually, on the park account.—*Mr. Frost.*

of them made at least eight loads of good muck in the night-yard, besides the benefit done in treading and dunging on the land in the day-time, which was very great, the soil being very light. The result of the ox system is, that charging the ox for his agistment the first year, for the value of the grass and turnips the last year, and putting what he has in three intermediate years as an equivalent for his labour, after every allowance for risk, each ox will pay at least twenty per cent. profit. In what instance does a horse produce so much?

"I do not contend that the ox can be used on all soils; upon a very stony soil he cannot; nor can the horse in all places be wholly excluded from husbandry; but every occupier of a large farm may, at least, use some oxen to very great advantage. They are all worked at Windsor in collars, as their step is found to be much more free than when coupled together with yokes; and they are found to do their work with much greater ease in collars than in yokes, which ought every where to be exploded.*

"The different kinds of oxen are in some measure suited to the soil. Upon the Norfolk farm, which is a light soil, the Devonshire sort are used; † upon the Flemish farm, where the soil is strong and heavy, the Herefordshire; and the Park, where the business is carting, harrowing, and rolling, the Glamorganshire. They are all excellent in their different stations.

* They are used without shoeing. When put into waggons, one is in the shafts and four before, two and two abreast. In carts a single ox is often used Glamorgans are best adapted for teams. Four teams are kept for park work —*Mr. Frost.*

† Besides the working oxen, a few Carmarthens are grazed on the Norfolk farm, and lately about thirty Carmarthen cows have been kept for suckling on the same.—*Mr. Frost.*

It

"It may not be improper to mention a very simple method which has been discovered, of first training them to the collar, which is nothing more than putting a broad strap round their necks, and fastening one end of a cord to it, and the other to a large log of wood, and letting the ox draw it about as he feeds in his pasture, for three or four days, before he is put into harness, by which means he is very much brought forward in docility.

"I have before observed, that twenty per cent. may be considered as the average profit of an ox, stating them to be bought in at 10*l.* and allowing them to sell for 25*l.* taking off 10*l.* for the two years they are not worked; but last year beans being of very little value, they were kept longer than usual, by being stall-fed with bean-meal, which answered very well, as they were brought to an average of nearly 30*l.* and one of them, a Glamorganshire ox, originally bought for 8*l.* and, from his compact round make, always called the little ox, thrived to such a surprising degree, that he became too fat to be able to travel to Smithfield, and was therefore sold to Mr. Charlwood, a neighbouring butcher, for 47*l.*

"Next to the advantage obtained from oxen, as much benefit as possible has been endeavoured to be derived from sheep, by means of the fold. Two ewe flocks are kept, of four hundred each; * the soil being light and dry admits of winter folding (except when the weather is wet) upon the young clover; a practice

* On the Norfolk farm about 450 South Down ewes are kept, and their lambs are reared for stock: on the Flemish Farm a wether flock of about 500, consisting of Wiltshires, South Downs, and Hampshires.—*Mr. Frost.*

much

much to be recommended, as it is productive of a great crop of clover, and prepares the land the ensuing autumn for a crop of wheat, without any further assistance. Another excellent practice is folding upon light land, in dry weather, immediately upon the sowing of the wheat, which may be put forward, or kept back, a fortnight or three weeks, on that account; and it is not amiss to have the fold rather large, and to give the sheep a turn or two round the fold in a morning before they are let out, to tread and settle the land, which does a great deal of good, over and above their dung.

" A third method of folding has been found to answer almost beyond description. This was first tried in the winter of 1793, but from an idea of the shepherd, that it injured the sheep, has been since disused: but as there is good reason to believe that there was no just ground for such an opinion, it is meant to be revived next winter.

" A dry sheltered spot is selected, and sods of maiden earth, a foot deep, are laid over the space of a very large fold. It is then bedded thinly with rushes, leaves of trees, fern, moss, short straw, or stubble; and in hard or wet weather, the flock, instead of being penned upon the clover in the open fields, is put into this warmer fold, where the usual quantity of hay is given to them in racks; and every night they are so penned, the fold is fresh littered. When this has been continued, at intervals, during the winter, a layer of lime, chalk, rubble, or ashes, six inches thick, is spread over the whole surface; and when it has heated together, about the month of April, the whole is turned up, and mixed together, and makes the very best manure that can be used for turnips.

" I have been particular in describing these methods of

of folding, as they are not common in many places, and in others entirely unknown; and to gentlemen who have parks and large plantations, which afford abundance of leaves, this hint may be the more deserving attention.

"Upon the Norfolk farm, the land not having been yet marled or clayed, the clover is apt sometimes to fail, which is also the case elsewhere, upon the same sort of land. When this happens, his Majesty does what every other person in a similar situation should do; instead of letting the ground remain unproductive, the next year it is sowed with vetches, which are nearly as valuable as the clover, and wheat always grows remarkably kind after them.

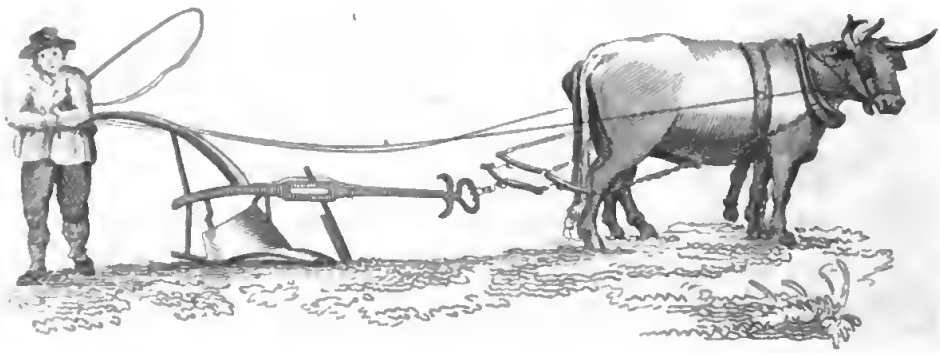
"As to implements, the Norfolk plough is chiefly what is used; and upon a light soil, it is certainly preferable to any other.* It plows a cleaner furrow, by completely moving the whole body of earth, and inverts it much better than any other plough; and to establish its superiority over the common ploughs of the neigbourhood, I need only add, that from its construction it is nearly the draught of an ox easier. There is likewise a Norfolk harrow, very useful for harrowing what are called brush-turnips, or any other turnips, preparatory to their being hoed. I must be allowed, likewise, to mention the drill-roller, which consists of cast-iron rings, made at the Norwich foundery, and slipt on upon a round piece of wood, as an axle tree. This is one of the best things that has ever been introduced for the preparation of the land for any sort of corn, where the soil will admit of its being used. By the corn being so well deposited, it takes better

* Both the Norfolk and Rotheram ploughs are now used.

root,

The Norfolk Plough.

recommended to be used on the light soils of Berkshire.



The Suffolk Iron Plough.

recommended to be used on the heavy soils of Berkshire.

root, and at least one-fourth of the quantity usually sown may be saved.

"The Flemish farm, which I have before mentioned, was so named from an intention, at first, of carrying on a system of husbandry similar to that practised in Flanders, which consists of an alternate crop for man and beast; but the soil being strong and cohesive, upon trial, it has been found to answer best under a four-course shift, more like some parts of Gloucestershire; as thus, first year, wheat; second, cabbage or clover; third, oats; fourth, beans.* The quantity of arable land on this farm is 160 acres, or 40 acres in a shift. There are two things observed upon this farm, which may be worth notice: the first is, the practice which has for these two years past been adopted, by taking off the tops of the beans, just as the blossom is set; this not only improves the quality, but increases the quantity, and causes them to ripen sooner, which is a considerable advantage, by giving time to get the succeeding crop of wheat in, perhaps a fortnight earlier. The other is, that of sowing clover early in the spring, among twenty acres, or one half of the wheat, and bush-harrowing and rolling it in. This has produced a very fair crop of clover the next year, and the other half after the wheat, is winter and spring fallowed, and planted with cabbage. There is a double advantage resulting from this; that one half of this shift, so managed, becomes a summer crop, and the other half a winter crop; and by observing the next year to change the parts, by sowing the clover where the cabbage was

* For the prevailing system of cropping in use at present on this farm, see Chap. VII. Sect. III.

was

was before, the clover and cabbage do not come round upon the same ground but once in eight years.

"Cabbage has been tried several years, but his Majesty's husbandmen never got into the right management of it till this year; but now the crop is remarkably fine.

"It will not be improper to mention, that the drum-headed cabbage is the best sort, that the seed should be sown in August, the plants first set out in November, and transplanted for good in July. The next thing to be noted is their application: they are certainly inferior to turnips for fatting, but superior in the increase of milk, either of cows or ewes, and therefore they are particularly good, where there is a dairy or a breeding flock of sheep; and I trust his Majesty will, the next yeaning season, try an experiment, of which I have high expectation, which is, to slice or quarter the cabbage, and feed the ewes with them upon such of the meadows as want manuring, which I flatter myself will be of inestimable service to the ewes and lambs, and be the means of increasing the next year's crop of hay considerably.

"The true light of viewing these improvements is, to consider them as a sort of new creation to the public; for, as it is a fact not to be controverted, that the reduced number of acres in the Park, from their improved state, support as many deer and other cattle as the whole did before, the produce obtained from the farms is all clear gain; and as the crop of wheat and rye from the 140 acres sown, upon the most moderate calculation, may be set at 3960 bushels, and allowing six bushels to a human mouth, this gives a yearly provision in bread for 560 people; to say nothing of the fatting-

fatting-off of forty oxen, the breed of 800 sheep, and the growth of at least 5000 bushels of oats and beans, all of which, it must be observed, goes in aid of the public market, as the work is done by oxen entirely.

"As more experiments are in future made, I may perhaps trouble the Society with an account of them, as I am persuaded they cannot be registered any where else, to give them the credit, and to excite the imitation I flatter myself they may deserve; but for the present I shall close my observations upon his Majesty's farms with a description of his mill, which I consider as the most benevolent thing that can be done for the poor, and which I most earnestly recommend to all gentlemen of landed property, who have like means of doing it. A small over-shot mill is erected, and worked by the waste water from the lake below the lodge, where a sufficiency of corn, two-thirds wheat and one-third rye, is ground, dressed, and given to all the labourers, at 1*s.* 4*d.* per stone, of fourteen pounds,* in quantities suitable to the size of their families, which is the first of all comforts to them, and a saving of at least twenty per cent. from what it would cost them to buy it from the mealmen or shopkeepers.

"I am, Sir,

"Your obedient humble servant,

"NATHANIEL KENT."

Craig's Court,
30th October, 1798.

MR. MORE.

To this I shall only add, that on Shrubs-hill farm,

* The mill is still in use on the Norfolk farm, and is attended with the happiest effects. Flour ground at it is sold to the labourers, and other workmen in the Park, at 6*s.* 8*d.* per bushel, let the price of wheat be what it may.—*Mr. Frost.*

which

which is likewise in the occupation of his Majesty, but chiefly in Surry, the superior advantage of oxen is rendered still more apparent. The soil is a light sand; and of the 200 acres of which it consists, 80 are in aration. It is worked wholly by six oxen, and two of them yoked and driven in reins by one man, will plow an acre a day, with a Rotheram plough.

At the other extremity of the county, perhaps the next greatest general improvement has been effected by Edward Loveden Loveden, Esq. of Buscot park. By erecting his mansion on a delightful spot, but amidst sterile and ill cultivated lands, and by keeping in his own hands many hundreds of acres, he has gradually brought that portion of his estate to four times its original value, when he began to occupy it; and has rendered it equally ornamental and advantageous to the public and to himself. By combining sound judgment with great zeal and unremitting attention, he has changed the very face of nature, and made her subservient to his ends. Neither carried away by visionary plans of improvement, nor rejecting rational theory, because it was not confirmed by experience, he has proceeded by degrees to accomplish his designs, and has set a most valuable example to country gentlemen of large fortune, and even to farmers by profession.

Though actively engaged in bringing his domain to its present state of perfection for upwards of twenty years, on its outskirts he has still some portions of coarse sour pasture land, which is annually diminishing, by being broke up and cultivated. He begins improving, by grubbing up brakes and furze, then paring and burning, and sows turnips, and plants cabbages and potatoes, in order to support a large winter stock, which creates manure, the very soul of farming.

Many

Many other gentlemen of this county, though on a smaller scale, might be enumerated among the best informed and most successful improvers of land and stock in the kingdom; but the limits of this undertaking do not allow me to particularize them. Some of the most distinguished are incidentally noticed in the different sections of the work, which I have studied to keep free from partiality or prejudice.

I. DRAINING.

A system of draining, adapted to soil and situation, is one of the most valuable and permanent improvements that modern times have introduced. But as no rules of uniform application can be laid down; as the best mode of drainage in one place may be wholly improper for another, it would answer little purpose to enter into details of the various plans that have been recommended for this purpose.

In this county, we find them all partially used. In a tenacious soil, the mole-plough used by Mr. Loveden, and an implement of the same kind employed by Mr. Batson, of Winkfield, are found very servicable;*

* Lumbert's patent machine for draining, with the addition of Rogers's apparatus, as exhibited in the Gloucestershire Report, is excellently adapted for the drainage of strong cohesive soils, and may be performed at one-fourth of the usual expence, without injuring the surface.

Scott's mole-plough, which costs only two guineas, is likewise commended as an useful implement.

Draining is also performed by a wheel, or roller, which has been much approved of in some places.

Various tools are employed in opening the trenches beyond the depth of the spade. Their utility has been differently appreciated.

and

and where more water is to be carried off from clayey or adhesive soils, the *Essex* mode of draining, which has been extensively tried in Windsor Great Park, is cheap, and found very effectual, and deserves to be introduced, wherever circumstances will permit.

When under-draining is performed on a loose, stoney and crumbly soil, after the earth has been removed to a proper depth, rubble stones are thrown in, and covered with haulm, to prevent the mould from mixing with the stones in the drain; and then the surface is levelled as before. Or sometimes thorns, brush-wood, &c. are laid along the bottom of the drain, and the earth or sod, inverted, returned, and the excavation filled up. About Binfield, in the Forest district, what is called rib-draining, is in use. The drains are filled with alder, heath, &c. and will last more than twenty years. Ths expence 5*s*. per pole.

Stone-draining is likewise practised in the vicinity of gentlemens' seats, but it is too expensive on common farms, except as a principal channel into which the subordinate drains are to fall. The cheapest mode of stone-draining, that leaves an open uniform passage, is to set two flat stones triangularly, meeting at the point upwards, and then to fill up the residue with rubble or loose stones.

Brick drains are durable, but expensive. In order to encourage this valuable improvement, all bricks used in draining should be exempt from duty. To tax the operations of husbandry, is incompatible with any sound policy.

Under-draining varies so much in its expence, according to the soil and the mode employed, that any estimate, on general principles, must be fallacious. Its advantages are, that it neither offends the eye, nor occupies

cupies space, at the same time that it does not endanger the safety of the smaller animals.

Open draining and cutting grips to carry off the surface water, may be performed in some cases by the plough, but generally manual labour is necessary. In meadows, and other low and wet situations, great attention should be paid to the open drains and ditches, and the expence of scouring them out annually is not inconsiderable, though the soil helps to repay it.

Many of the Thames meadows are ill drained, and others wholly neglected. The same may be said of the Loddon; but there, from the flatness of the land, the facilities are less, and the omission is more excusable. On the Kennet, draining is more generally practised, and it is attended with obvious advantages.

Common meadows, however, in every situation, are a great bar to draining, and indeed to every improvement. Common arable fields present the same difficulties; and it is not one of the least disadvantages attending them, that they are seldom otherwise drained, excep by throwing up the land into ridges where it is wet, and allowing the water to find its way along the furrows to the nearest channel, or to stagnate and destroy vegetation, when nature has not formed any outlet.

In this county, however, the gentleman, the yeoman, and the farmer, where their lands are in severalty, are not unattentive to draining, from a conviction of its beneficial effects. If it is not so universally practised as it deserves to be, the omission usually arises neither from want of skill nor want of spirit, but from the causes already assigned.*

* In some enclosed parishes, however, I observed a culpable inattention

Elkington's method of draining, which is well known, has been productive of much good. He begins at the fall, and works upwards. But good sense, and a little observation, will always be the best directors in draining. To know how to perform this business properly, it is necessary a person should be acquainted with the circumstances of the soil at different seasons; and after he has ascertained what ought to be done, the cheapest and most effectual mode of executing it will undoubtedly receive the preference.

II. PARING AND BURNING.

To explain the principle on which paring and burning is either injurious or useful to land, would be foreign to my purpose. In a work of this nature, the practical application of well ascertained facts, may well supersede chemical analyses. Paring and burning is certainly an ancient practice; but so little have its effects been understood, that formerly, and indeed partially to this hour, there were restrictive clauses, indiscriminately inserted in leases, to prevent the tenant from having recourse to it. To the ignorance or prejudice of land stewards, equally unacquainted with the quality of soils, and the processes of nature, this absurdity could alone be owing. Whether adapted to situation or not, to them was nothing; or whether it was the paring or burning that exhausted the land, or the crops that followed, were among the hidden mysteries which their talents and pursuits did not qualify them to explain.

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tion to draining, even where the tenants could not plead want of leases, as an excuse for undertaking expensive improvements.

"Paring

"Paring and burning," says a gentleman of this county, "should never be practised but for the destruction of coarse grasses. Exhausting the turf too much by fire, and taking too many crops after burning, and before the land is rested, has given rise to well-founded objections."

"On the downs," says Mr. Pearce, "where a light black soil prevails, the first crop is generally turnips; the piece having previously undergone the pernicious practice of burn baking; which being fed off, puts the land in a pretty good condition for a crop of oats, with which perennial darnel, or, as the farmers call it, rye grass, is sown. The piece thus continues three or four years on a forced system, greatly to the advantage of the tenant, no doubt, but at the expence of ruining the land for ever after, as pasturage. Indeed, what else can be expected from cutting up and burning not only the turf, but every germ of vegetation nature has for ages deposited, to keep up a succession of herbage?"

On this it has been justly remarked, that the author is certainly right in saying that the land is for ever after ruined for pasturage, for nothing can be worse than an old rye grass ley on chalky downs, or any poor soil; and no farmer of any experience would ever expect any pasturage, after such management. But this sort of land may be made to produce pretty good crops of corn and artificial grasses, and the more it has been burnt the better."

Hence it may reasonably be inferred, that it is not paring and burning that does the mischief, but injudicious management afterwards. Downs once broken up, must be continued in an artificial state; and under a proper system they will be infinitely more valuable than before. This fact is proved by experience. Dr.

Beeke's method* of reclaiming poorer land than almost any part of the downs, evinces that paring and burning is an essential improvement, which may be advantageously applied to the lightest and most shallow soils.

About Buckland, it has been thought of service even after the land has been reclaimed.

But whatever objections may be urged against the practice on poor soils,† which are evidently more specious than real; on all sour, tenacious soils, and where brakes, furze, and coarse grass cover the surface, paring and burning are indispensable.

This is the practice of that enlightened agriculturist, Mr. Loveden; and the utmost success has attended it in Windsor Great Park. I have this general fact on the authority of His Majesty's Bailiff, who likewise communicated the following:

"A piece of rough land, containing about four acres, being plowed and harrowed, and afterwards burnt, produced ashes sufficient to manure fifteen acres of turnips, and enough was left on the land itself for turnips, which are frequently manured here with ashes."

When saintfoin is worn out, paring and burning are the only advantageous and certain means of bringing the land back to tillage; and though the practice ought neither to be frequent, nor indiscriminately applied, in itself it is not to be condemned, but often deserves being applauded. The nature of the soil, the object in view, and other concomitant circumstances, ought never to

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* See Wastes.

† About Lambourn, the downs taken into cultivation are pared and burnt: first crop wheat; some few oats. This information I received on the spot. The practice is indefensible; but it is the mode of cropping alone that is wrong.

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be overlooked in any agricultural process. "Coal," says Mr. Kirwan, "is an essential ingredient in the food of all vegetables: it is found in all vegetable and animal manures that have undergone putrefaction, and is the true basis of their ameliorating powers." It is therefore cropping the land improperly that exhausts it, and not paring and burning.

Rough coarse land should be pared about December or January, that the action of the frost may prevent the soil from being baked when fire is applied. Light soils may be pared at any time in the spring. When burnt, a smouldering fire should be kept up to prevent the salts from being sublimated; and it would, on shallow soils especially, be adviseable to leave the spaces where the heaps of turf are to be placed, unpared, in order to preserve a portion of the mould below. The sooner the ashes are spread the better. The depth to which the soil is to be pared, and the expence, will depend on the nature of the soil. The breast plough is commonly used; but in some situations the paring plough will supply its place, though seldom so effectually.

SECT. III.—MANURING AND MANURES.

To render the earth subservient to the wants of man, manure is no less necessary than artificial food is requisite, to enable animals to support labour. The animal we devote to toil, and the soil from which we wish to reap an increase, must both be supplied with their proper aliments. The food of the latter is manure; and it is as various in its kinds and qualities as the food of animals. By a regular connection of causes and effects,

the one is productive of the other. The dung of animals in a great measure assists to raise the crops that yield them sustenance; and the crops again are converted into dung. One kind of soil may likewise be used as a fertilizer of another. The resources indeed of the agriculturist are extensive, when he has knowledge and inclination to call them into action.

Yet though manuring has been practised, wherever cultivation was attended to, its principles are still but vaguely understood, and the best adaptation of the different articles of which it consists to different soils, is far from being generally ascertained by practical farmers. To the professed writers on this subject I beg leave to refer them, to Kirwan, to Lord Dundonald, &c.*

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* It may not perhaps be unacceptable to my readers to see a compressed account of the great Sir Francis Bacon's ideas on "Composts and helps of ground," in his Natural History. We know little more even at this period!

"The first and most ordinary helpe," says he, "is stercoration. The sheeps' dung is one of the best, and next the dung of kine; and, thirdly, that of horses, which is held to be somewhat too hot, unless it be mingled. The ordering of dung is, if the ground be arable, to spread it immediately before the plowing and sowing, and so to plow it in: for if you spread it long before, the sunne will draw out much of the fatnesse of the dung: if the ground be grazing ground, to spread it somewhat late, towards winter, that the sunne may have lesse power to drie it up.

"The second kind of compost is the spreading of divers kinds of earthe, as marle, chalke, sea sand, earth upon earth, pond earth, and the mixtures of them. Marle is thought to be the best, as having most fatnesse; the next sea sand; chalke over-heateth the ground a little, and therefore is best on cold clay grounds, or moist grounds. As for pond earth, or river earth, it is a very good compost, and I judge it will yet be better if there be some mixture of chalke.

"The third helpe of ground is by some other substances that have a vertue to make ground fertile, though they bee not merely earth, wherein ashes excell. Soot also, though thin spred in a field or garden, is tried to be a very good compost. Salt is too costly, but mingled with seed corn

Under tillage and grass lands, the principal manures and their application have already been noticed. I shall, therefore, only briefly recapitulate the whole, and supply omissions.

Yard Dung.—In every part of the county it is a principal object to collect as much yard dung as possible; but from neglect, or the improper situation of the yard, the best part of it is frequently lost. Farmers, however, begin to see this, and when their yards stand on a slope, or are otherwise ill situated, for saving the liquid part of the dung, they dig a cavity in the centre, which in the most unfavourable cases would be useful. I have already mentioned Mr. Selwood's farm yard with due praise, and it may serve as a model. Many others are exempt from the inconveniences to which I

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corn and sown, it doth good. And I am of opinion that chalke in powder, and mingled with seed corn, would do good.

"The fourth helpe of ground is the suffering of vegetables to die into the ground, and so to fatten it, as the stubble of corne, &c. It were good also to try whether leaves of trees swept together, with some chalke and dung mixed to give them more heart, would not make a good compost.

"The fifth helpe of ground is heat and warmth. It has been anciently practised to burne heath and ling, and sedge, with the vantage of the wind upon the ground. We see that warmth of walls and enclosures mendeth ground: we see also, that lying open to the south mendeth ground: we see again, that the foldings of sheepe helpe ground as well by their warmth as their compost.

"The sixth helpe of ground is by watering and irrigation, which is in two manners: the one by letting in and shutting out waters at seasonable times; for water at some seasons, and with reasonable stay, doth good; but at some other seasons, and too long stay, doth hurt. And this serveth only for meadows that are along some river. The other way is to bring water from some hanging grounds, where there are springs, into the lower grounds, carrying it in some long furrows, and from these furrows drawing it transverse to spread the water. And this maketh an excellent improvement both for corne and grasse."

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allude; but it must be confessed that ancient farm yards are frequently ill adapted for shelter of cattle, or for retaining their dung.

Yard or pot dung is generally preferred when rotten, and on a light soil it appears to be most suitable. On stiff land, however, fresh dung, though it is apt to bring weeds, would probably be applied to advantage. Both ways deserve a trial.

Yard dung is equally applied to corn, and to meadows and pastures, when other substitutes cannot be procured for grass.

Mr. Selwood, of Aldworth, and others, carry out liquid manure in water carts, and spread it over the land.

Folding.—The folding of sheep continues to be almost the universal practice in this county; and on the hills, it is nearly the only manure attainable. On turnips, the sheep are hurdled, and the fold gradually extended for the future crop of barley. They are likewise folded at night on land intended for wheat, on all the light soils more especially; and in this situation it is calculated that their manure is worth 5*s.* per week per score. The horned sheep, or Wiltshires, and the native Berkshire notts, are most esteemed for folding on fallows.

Peat Ashes, &c.—Though it is probable that peat, nearly of the same nature as that along the Kennet, is to be found in other parts of the kingdom, its general application as a top dressing to clovers, and other artificial grasses, to turnips, to vetches, and even occasionally on wheat, is perhaps unique in this county, and therefore will require a more extended detail than other manures.*

* See also Appendix.

In

In the year 1745 it was first burnt at Newbury, by a Mr. Thomas Rudd, who at the same time spread the ashes on clovers, for which they have ever since been famous. An acre of peat land at that period sold for 30*l.* : it has since sold, according to its quality, for 300*l.* and 400*l.*, and in one instance reached about 800*l.* per acre.

Over the stratum of peat, which is about five or six feet deep is a good meadow soil, and under the peat is gravel. The peat varies in colour, but the blackest is reckoned the best, and is used for firing, the ashes of which are most esteemed, and have the reddest colour. What is burnt for sale only, is mixed with turf and other substances, which gives it a pale whitish hue.

Peat is usually dug with a spade for that purpose, resembling those used in Scotland, from the middle of May to the end of June. It is conveyed from the spot where it is dug, in little wheel-barrows, to a short distance, where it is spread on the ground, and after lying about a week, the pieces are turned. This being three or four times repeated, a heap is made in the middle of the place where the peat is spread, and in the centre of this heap some very dry peat is put, which being lighted, the fire communicates slowly to the rest of the heap. When it is completely lighted, an additional quantity of peat is put upon the heap, and this operation is continued till the whole is consumed, which generally takes a month or six weeks, as quick burning is not approved of. Rain seldom penetrates deep enough to extinguish the fire. The heap is commonly of a circular form, and rather flat at top. At first it is very small; but at last it is sometimes two or three yards deep, and six or seven yards in diameter.

The ashes being riddled, are conveyed away in uncovered

covered carts, to a distance sometimes of twenty miles, and put into a house, or under a shade, to keep them from the wet, till they are wanted to be put on the ground.

The usual time of applying them is March and April. They are generally taken in carts, and sown on the ground before or after the seed is sown, and both are harrowed in together. When used only as a top dressing they are only sown on the land. The quantity is usually from twelve to fifteen Winchester bushels per acre, according to soil and crop. It is supposed that too large a quantity would be injurious. For barley, wheat, and peas, they are not in much estimation; but for all sorts of artificial grass, more especially, they are preferred to all other manures. In turnips they assist to prevent the ravages of the fly; and in grass seeds the farmers reckon on an acre, manured with ashes, producing nearly a ton of hay beyond what it would have yielded without them.

One person with a double cart will sow several acres in a day. The effect is supposed to be of no longer duration than two years. On meadow land, from fifteen to twenty bushels may advantageously be put; they much improve the grass.

The price at Newbury wharf is from fourpence to fivepence per bushel. At Reading, sevenpence or eightpence. With the distance, the price varies of course. Carried to Bisham, the expence of manuring an acre will be about 15*s*.

Peat ashes, found at Marcham, in the Vale of White Horse, are likewise used on clover.

The ashes of coals are spread over meadow land about Milton

Milton and other places; and the ashes of peat and turfs, in the Forest District, are in considerable estimation.

In the Vale of White Horse the ashes of bean stubbles are found very beneficial on meadow lands. Francis Justice, Esq. of Sutton, informed me that they brought the white clover where it was not seen before.

Chalk and Lime.—About Hurley, Wargrave, and other places in the eastern part of the county, chalk pits of a good quality are to be found; and chalk is frequently in use as a manure, though less so generally than it ought. It costs about 1*s.* 6*d.* at the pits; and from seven to ten loads will be sufficient for an acre.* In some places it has been thought useless, in others injurious. The fact is, it can never be applicable to land of the same nature as that from which it is drawn. On clay and strong loams it is extremely useful, as has been experienced about Binfield and other places. On a sandy soil, it would likewise be proper. The reason on which this principle is founded is well known to chemists.

Lime made from chalk would probably answer where the raw material will not. The component parts of the chalk and the nature of the soil must determine this.

Lime from lime-stone is used about Hampstead Norris, and partially in other parishes. At Cumner it has been tried, and found hurtful. This is what might naturally be expected. Lime on a calcareous soil must, generally speaking, be worse than useless.

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* On the authority of Mr. Stevens, of Binfield.—I have seen it stated, however, that it would cost 3*l.* to manure an acre of land in the vicinity of the pits. This I can scarcely credit.

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The fertility of the Vale of White Horse is in a great measure owing to the intimate amalgamation of the loam with the finer particles of the chalk, washed down from the hills. Though along these hills it is unfit for manure, from its being mixed with grit and other heterogeneous substances, the washings, or the white water descending from the hills in rain, is profitably carried over the fields below, by intelligent farmers.

Composts.—Mould by the road sides, scourings of ditches, animal dung, lime and chalk, all enter into composts, of which considerable quantities are made in convenient situations. The surface of these heaps might be advantageously sown with turnips or buck-wheat, both to prevent weeds and evaporation.

Marl.—Though marl is probably abundant in this county, it does not appear to be much used. Sir John Throckmorton has found it very serviceable. The shell marl, over the peat in the Vale of the Kennet, has not been employed, as far as I know, in manuring. On a light sandy soil, marl is the best possible addition. Common marl contains, according to Kirwan, from sixty-six to eighty parts of pure chalk, the remainder is in various proportions pure earth of alum and silex.

Malt Dust, &c.—It is long since malt dust has been employed as a manure in this country; and its use has been of some standing in Berkshire. It quickens vegetation, but its force is soon spent. Sown by the hand, from twenty to thirty bushels per acre, with barley, and harrowed in, found very useful about Marcham, Shefford, and Aldermaston.

Mr. Selwood, of Aldworth, employs it as a top dressing for wheat.

Soot is a valuable manure. It is sometimes sprinkled over

over the young wheat in the spring, but more frequently applied to grass lands.

Soapers' Ashes, and Soap Suds.—The value of soapers' ashes on grass lands is well known; and a very respectable friend assures me that he has found soap suds, which are generally wasted, of great utility on his cold moist meadows.

Woollen Rags, &c. commonly procured from London by the Thames, are in considerable estimation as a manure for wheat. At Bisham a ton is considered as sufficient for three acres; the cost eight guineas. Tags of wool, which are obtained in some quantity from Witney, in Oxfordshire, as well as rags, are applied to some of the lighter lands in the Vale, about Marcham, &c.

Green Crops plowed in.—Frequently practised by some of the best farmers bordering on the White Horse hills, and found much less expensive than carrying dung from the yard. Vetches, buck-wheat, rye, &c. are well adapted for this purpose.

Sweepings of Streets in Towns.—A valuable, and generally a cheap manure. Formerly it was an expence to have it drawn away; but now it is commonly contracted for by farmers, who pay a reasonable price for the privilege.

Horn Shavings, &c.—The following communication was addressed to the Editor of the Oxford University and City Herald, in March last, and I think it of sufficient consequence to be preserved here.

"Sir,—As information on improvements in agriculture is of use to the public, I beg leave, through the medium of your paper, to recommend, as a most excellent manure for grass and mowing land, the use of bone dust and horn shavings. Having resided on a dairy farm for many years, I have used it with great success.

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The quantity is from 50 to 100 bushels an acre, which will be sufficient, if the land is any thing tolerable, and will endure for five or six years in great perfection. The advantage in carriage is very great, particularly where the land lies at a distance, or through bad roads, as you may draw at one load sufficient to manure an acre. This, with its great durability, must recommend it to every farmer who has an opportunity of obtaining it.* The most proper season is February or March, though I have frequently laid it on at Michaelmas, and always took the advantage of a wet day or two, by which means it immediately settled in the ground. The swathes of hay and clover I have had were great indeed; and should any of your numerous readers be induced to try the use of it, I am certain they will find their advantage."

The value and application of pigeons' dung, night soil, chamber-lye, &c. &c. &c. need not be pointed out to the intelligent and spirited Berkshire farmer.

SECT. IV.—WEEDING.

"Weeds," says Ellis, in his Chiltern and Vale farming explained, "as they are part of the curse entailed on man's posterity, for his disobedience to his Creator, do visibly shew themselves; and act in opposition to man's interest in most places, where care and diligence do not supplant their several mischiefs."

* At Sheffield it is now become a trade to grind bones for the use of the farmer. If bones, however, are mixed in a heap of lime, they will in a short time be reduced to powder.

Weeding is in no place wholly neglected in Berkshire; but it is almost every where less regarded than its importance deserves. "It would be well," observes my friend Theodore Price, Esq. of Binfield, "if thistles and docks were cut up, at the parish expence, in common fields, lanes, and by road sides. If thistles are permitted to go to seed before they are cut, half the arable land in the parish may be sown with them; and if docks are permitted to mature their seed, which is often the case, before they are cut, and then thrown into the lanes, the next heavy rains may plant half the meadows in a parish with them. They should, if ripe, always be burnt; and it would be much more rational and useful for the churchwardens to pay for the eradication of weeds in the situations I have described, than for hedge-hogs and the heads of sparrows."

I perfectly coincide in this sentiment, and think that women and children might at leisure time be profitably employed in clearing the lanes and common fields of docks and thistles. On inclosed lands, it ought to be penal if a tenant suffers them to seed, and to prejudice his neighbour.

The weeds most injurious to arable land in this county are:

Couch grass. This is properly the name of the *triticum repens;* but it is frequently applied to other grasses with a perennial creeping root; among these are the bent grasses (*agrostis*), creeping soft grass (*holcus mollis*), tall oat grass (*avena elatior*), and several others, which can only be destroyed by repeated summer plowings, or by forking them out and burning them.

Charlock is the *raphanus raphanistrum;* but the name

name is usually applied to other plants equally noxious; and some of them more frequent, namely, the wild mustard (*sinapis nigra*), and wild rape (*brassica napus*). Being annuals, and the seeds of an oleaginous nature, they will vegetate after lying in the ground half a century. By drilling and hoeing corn, or by weeding before their seeds ripen, they may be effectually extirpated. The same indeed may be said of all hurtful weeds.

Melilot (*trifolium melilot officinalis*), white darnel (*lolium termulentum*), and stinking camomile (*anthemis cotula*), are injurious to wheat crops while growing, and the two former lessen its value at market.

Corn marigold (*chrysanthemum segetum*), may be destroyed by manuring with chalk, as well as by extirpation.

The corn poppy (*papaver rhœas*), the bind weed (*convolvulus arvensis*), and corn spurry (*spergula arvensis*), are likewise troublesome in corn fields. In some parts of the county, the poppy almost conceals the corn when it is in blossom.

Thistles are among the most noxious weeds among corn or grass. Under the name of thistles, various plants are known. The most effectual way is to draw them up with a wooden forceps,* particularly the *seratula arvensis*; or if they are cut an inch above ground they will be apt to rot, from the stem being filled with water.

Thistles, briars, and coltsfoot, if cut in August, will likewise often bleed to death.

The barberry (*berberris vulgaris*), is supposed to

* Described in the Gloucestershire Report, and which may be purchased for 2*s*.

possess

possess a blighting quality to the distance of many yards from the place where it grows, and therefore should be removed from the hedges of corn fields.

Dodder (*cuscuta Europæa*), is a parasitical creeping plant, and often injurious to beans. Sheep turned in among them will break its runners, and feed upon it.

In meadows and pasture grounds the following weeds are most obnoxious:

Docks, which have already been mentioned, and which may easily be extirpated by the common instrument for that purpose, or at least their heads should be cut off before seeding, which will prevent an increase of the nuisance.

Water hemlock (*phellandrium aquaticum*) is supposed to be poisonous to horses: the usual antidote is pig's dung. Common wormwood (*artemisia absynthium*), is likewise said to hurt horses.

Water cowbane (*cicuta virosa*), meadow saffron (*colchicum autumnale*), treacle mustard (*thlapsi arvensis*), and some others, communicate an unpleasant odour to the milk of cows, or are fatal to themselves.

Corn mint (*mentha arvensis*), prevents their milk from coagulating. Marsh marigold (*caltha palustris*), occupies much space, and is dangerous to cows.

Lousewort (*pedicularis sylvatica*), will give the scab to sheep, and occasion them to be over-run with vermin. Mouse ear scorpion grass (*myosotis scorpoides*), generally proves fatal to sheep; and the wood anemone (*anemone nemorosa*), will bring on the bloody flux.

The rot in sheep is ascribed by shepherds to sundew, marsh penny-wort, and common butter-wort; but it more probably arises from a flat insect called a fluke (*fasciola hepatica*), which is found in wet situations adhering

bering to plants, and has been discovered in the livers and biliary ducts of sheep affected with the rot.

All the crazeys, or ranunculus tribe, though pleasant to the eye in meadows, from their yellow blossoms, are injurious to the herbage, and are little relished by animals of any kind. They are difficult indeed to be eradicated; but some of the larger species may be reduced in their numbers by care and attention, as indeed may all kinds of weeds which are either injurious or useless.

To conclude this section, let these proverbial lines, which have been often quoted, be well remembered.

"One year's good weeding
Will prevent seeding;
But one year's seeding
Makes seven years weeding."

SECTION V.—WATERING.

A superfluity of water, or a deficiency, is equally injurious to vegetation. If much loss is sustained from a neglect of draining, in many situations, the want of irrigation, in others, is not less sensibly felt.

Irrigation is not a new invention: in some countries it has been practised time immemorial, and even partially in our own; but at this moment, it is much less generally understood and attended to than might have been expected, in an age when the melioration of the soil, and the increase of its produce, are promoted by much more expensive means.

The reason for this neglect may be, that irrigation requires

requires a little science and contrivance beyond what common farmers usually possess. It cannot be executed by money and labour only, like most other operations in husbandry. There must be a regular plan, levels must be taken, and the whole must appear on paper, before it is transferred to the ground.

The Rev. Mr. Wright, of Northamptonshire, has successfully explained the principle of irrigation, as far as explanation can be given on a subject which must ever vary with situation. To that gentleman the public are under considerable obligations, and to adopt a phrase once fashionable in a neighbouring nation—"he has deserved well of his country." But though the advantages of his plan are visible at South Cerney, no great distance from the boundaries of Berkshire, few have hitherto availed themselves of those facilities which this country presents in various directions.

The Thames meadows, more especially, are principally left to nature, which indeed has been propitious, but which might frequently be helped, both by draining and irrigation.

Near the entrance of the Thames into this county, however, Mr. Loveden, with an eye to whatever can improve his domain, has made in all about fifty-six acres of water meadow, which has doubled the original value and produce of the land. It is executed according to the Gloucestershire mode. The first forty acres cost 104*l.* 16*s.*; and the annual expence is under 10*s.* per acre. As so much depends on situation, he thinks general estimates of expence impossible or delusive.*

* Six acres were made this spring (1808), by Mr. Loveden, at the expence of two guineas per acre. The meadows are watered after the first rains in autumn; fed in the spring not more than a fortnight; the water then turned on for twenty-four hours; the grass mowed *early* for hay,

The water is turned off and on during the winter, and once more on haining in the spring. Again after mowing. The *plantago lanceolata*, as is usual in water meadows, is extremely abundant here.

About Abingdon are some water meadows; and the practice on a small scale has been introduced in other places; but on the long line of the Thames winter floods are the principal fructifiers of the soil, and they sometimes lie too long. Common meadows, which are frequent, are the best excuse for the neglect they experience.

On the Kennet there are several hundreds of acres of water meadow, more especially between Hungerford and Newbury; between the last named place and Reading they are less frequent.* Mr. Tull, of Chamber house, Thatcham, has, however, about 100 acres under irrigation. The annual expence of cleaning and keeping in order about 5*s*. per acre. A great improvement in the quantity and quality of his herbage has been effected by this. Nothing peculiar in the mode. Near Newbury, the meadows lie too high to be watered. In the vicinity of Hungerford the business appears to be well understood, and the practice is acknowledged to be highly profitable.

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which proves of a superior quality to any made from the best Thames meadows, watered only by the common river floods It is of the utmost consequence to cut the meadows early. Cows give much more milk from water fed hay, cut early, than from hay made from grass naturally, instead of being artificially flooded.

* Were Theale meadow, in the parish of Tilehurst, thrown into severalty and watered, it would be astonishingly valuable. In many other parishes, irrigation is rendered impossible from the nature of the tenure. It is the want of a general inclosure, not the farmer that is to be blamed for many apparent neglects in improvement. See APPENDIX.

At

At Milton about 100 acres are watered from a mill stream, rented at the rate of 1*s.* 6*d.* per hour, and the expence is well repaid. By mill streams, thousands of acres in all parts of this island might be irrigated. When the water is not wanted for the mill, the landlord might reserve the use of it; or the proprietor of the mill might beneficially let it to his neighbours.

John Polexfen Bastard, Esq., attempted irrigation at a great expence at East Lockinge, on the Ock, but it did not succeed, as I was informed; though the cause of the failure was probably more in the defect of judgment in his labourers than any fault in the stream.

Near Wantage some meadows are watered, and found to answer.

The white water from the chalk hills is profitably turned over the meadows about Ashbury. In fact, every spring rising high, as they frequently do, might be turned to advantage. Instead of being suffered to rush down the slope, at a small distance from its source it might be carried in a transverse channel along the descent, with small cuts at intervals to allow it to water the whole slope, and the level grounds below. The smallest brook might frequently be rendered as advantageous to the adjacent meadows as the largest rivers, and in many cases more so. In process of time, men will reflect, "and own their fathers have been fools so long."

CHAPTER XIII

LIVE STOCK.

THE live stock in this county is large, and of great importance; but except in sheep and hogs, it has no native or peculiar breeds.

SECT. I.—CATTLE.

The cattle which are almost universally adopted here are of the long horned, or common county breed, and differ in nothing from those of Warwickshire, Oxfordshire, and other neighbouring counties. In the dairying district, many of the cows are brought out of Warwickshire, often with too little attention to their qualities as milkers.

Mr. Loveden usually breeds his own stock, which is of the most improved Hereford race; and by continued care and attention he is raising it to a very great degree of perfection. A young bull of this breed,* of which we have given a drawing, is a model of symmetry, and completeness. He does not affect size so much as shape. It has long been a mistaken, though a prevailing notion, that large animals are desirable; but this begins

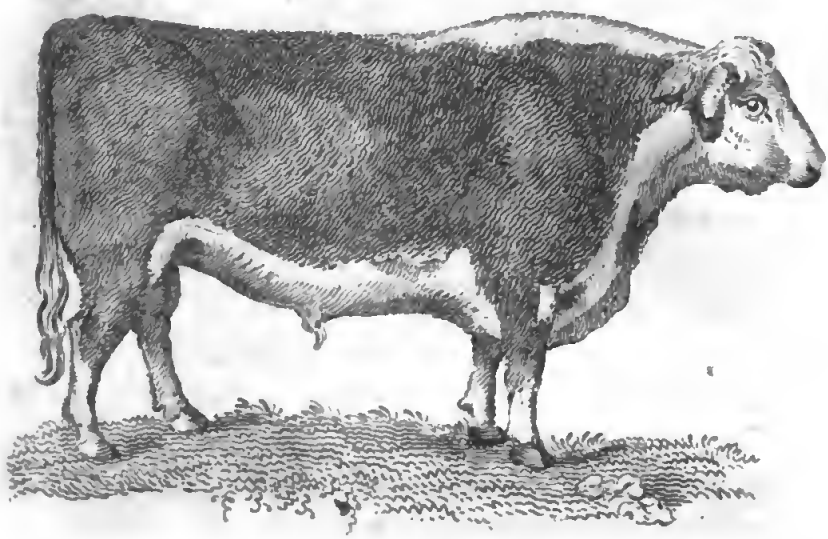
* He was purchased of the late Mr. Tully, and cost forty-five guineas when a yearling.

to

Berks.

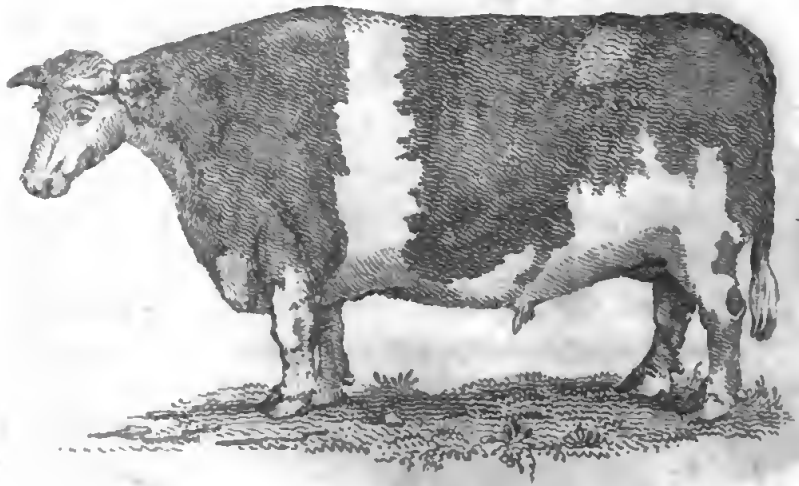
P. 372

Mr. Loveden's Hereford Bull.



P. 380

Mr. Tomkyn's large Ox.



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to be exploded, and apparently on just grounds. If three moderate sized ones can be kept in the room of two very large, the advantage will generally be on the side of the former. The gentlemen of this county who are engaged in agriculture, as well as the yeomanry and farmers, may be said to have fewer prejudices than most others; and if any have at times prevailed, they soon give way to the conviction of experience and observation. New and improved breeds of animals will gradually supersede the old; or the latter will be carried to a higher pitch of perfection, of which, with care, they are undoubtedly susceptible.

About Abingdon, and other places, the Yorkshire cows are getting into use, on account of the quantity of milk they yield. Mr. Justice, of Sutton, is particularly fond of them. The Holdernesse cows are kept by Mr. Webb, of Oakingham, who generously accommodates the poor with milk.

Mr. Harbottle, of Remenham, has brought with him from Northumberland the short horned cattle; but they are not very common in Berkshire. Several gentlemen keep Alderneys for milk and butter. In the Forest district many Welch cattle are kept, on account of the commons. The Hereford and Glamorgan cattle are preferred by the generality of the graziers; and the Scotch cattle are beginning to find admirers among the more enlightened agriculturists. In particular, Mr. Loveden, whose practices and improvements would furnish a Report of themselves, buys in two years old Scotch heifers, at about six guineas a head, and in little more than a year feeds them off, and finds them worth 10*l.* or 12*l.* each. He mentions having cleared 15*l.* by two in six months; and it is very questionable if so much

much advantage could have been made by animals of a greater price and size.

Impressed with the belief, that even on the best lands small or moderately sized cattle yield the greatest profit and the most delicate meat, I beg leave to recommend the useful but novel plan of Colonel Cunningham, for purchasing by commission all kinds of northern cattle, which will be found well worthy the attention of the public.

DAIRYING.

In the vicinity of towns cows are generally kept for the sake of making butter,* which fetches a good price, though varying with situation. From 1*s.* to 1*s.* 3*d.* per pound may be considered as the average wholesale price, when purchased by contract. To the consumer, the cost is generally from 1*s.* 3*d.* to 1*s.* 6*d.* Much butter is sent to London. The best butter, or at least what is reputed as such, is made about Wytham, Radley, and other parishes on the Berkshire borders near Oxford, where the land is good, and yet cheese making is little followed. Fine butter, however, is made in most parts of the county; but throughout its greatest extent, the produce of the dairy is chiefly applied to

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* If more attention were paid to the quality of the milk which cows yield, as well as to its quantity, and care were taken to breed from such as excelled in both respects, the dairies would be much more profitable than they are. It is a well known fact, that some cows give abundance of milk which yields little cream, and that others compensate, by the richness of their milk, for the smallness of its quantity. I have heard of cows whose milk yielded no cream whatever. In order to ascertain the merits of each, the milk should be tried separately.

family

family use; and in some places, suckling of calves is so much the pursuit, that it is difficult to purchase even milk or cream for tea and other purposes.

In the dairying tract, properly so called, which lies at the western extremity of the Vale of White Horse, chiefly within the hundreds of Shrivenham and Faringdon, though partially extending to Ganfield and Wantage, very large quantities of cheese are made during the summer; and here butter making is less an object, except when the cows are at hay or straw.

The number of cows kept in the parishes of Shrivenham, Coleshill, Buscot, Eaton Hastings, Faringdon, Shellingford, Uffington, Compton, and Kingston Lisle, which are among the principal dairying parishes, from a pretty accurate inquiry, do not amount to fewer than 3,000; and it is probable that the whole number is little less than 5,000, within the compass of the four hundred specified.

From the wharf at Buscot, belonging to Mr. Loveden, on which warehouses are built for the reception of cheese, and rented by the cheese-mongers in London, not less than between two and three thousand tons of cheese are annually sent down the Thames; and though a considerable part of this is purchased in the neighbouring parishes belonging to other counties, it is evident that the quantity made in the whole of the Berkshire dairying tract alone, cannot amount to less than one thousand tons annually, at the lowest calculation, allowing each cow to produce four cwt.

The cheese made here is chiefly of that kind known by the name of single Gloucester. From six to ten cheeses go to a cwt.; usually eight, nine, or ten.

In the mode of making it I did not find there was any

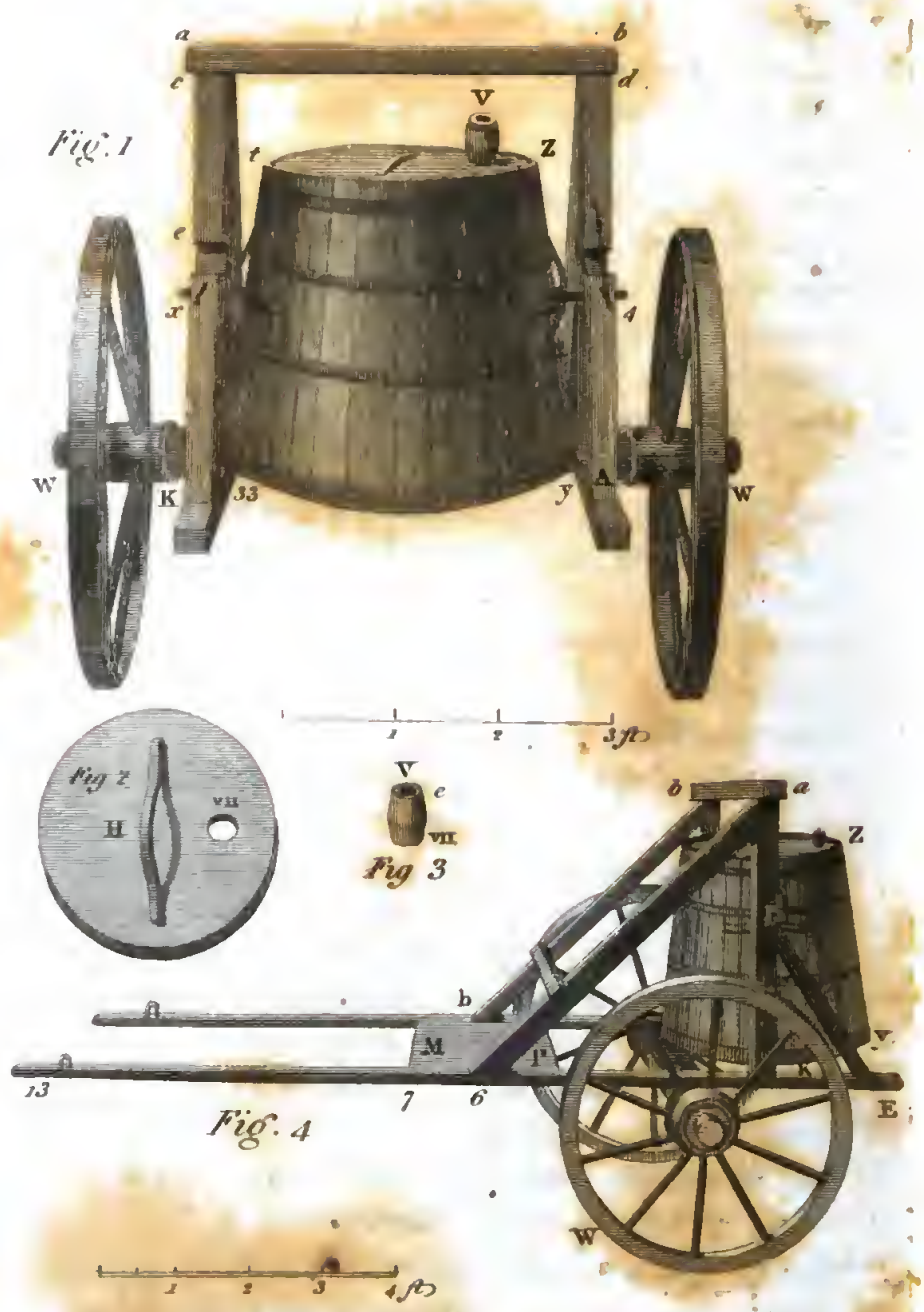
any thing materially different from the practice in Gloucestershire, and therefore it would be unnecessary to enter into the details. But from an examination of several dairies, I can affirm, that in point of cleanliness, neatness, and attention, nothing can excel them. Some of the dairies are fitted up with much taste, and almost all of them have every convenience that can be desired. Mr. Loveden's is very complete. To his cheese presses and churn he has applied Garnett's patent inventions, which diminish labour, and are found to be attended with every advantage that can be expected from them.

Snowswick, in the parish of Buscot, is famous for cheeses in the shape and external figure of pine apples. They are made on the farm of Mr. Pike, the property of Mr. Loveden, and sell considerably higher than cheeses in the common form, to which distinction they are justly entitled, from their peculiar richness and delicacy of flavour. Kept to a proper age, they are inferior to no cheese I ever tasted.

The first part of the process of making them is in the usual way. The curds are well worked with the hands, then pressed into a wooden mould in the shape of a flower pot, and afterwards suspended from beams, rafters, or pegs, in an airy apartment, in a net, whose meshes indent their surface like a pine apple. Salt is then rubbed over them, or they are steeped in brine. Mrs. Pike seems to think the former mode most advisable. No pressure is used; and yet in firmness when dry, they could not be distinguished from such as had undergone the force of presses.

A pine apple cheese usually weighs about five pounds, and in good years two tons are made of them on this farm

Mr Pennells Milk-Tankard near Farringdon.



farm only. Indeed I do not find that they are manufactured elsewhere.

Mr. Hobbs, in the same parish, has a very ingenious and cheap contrivance for drying his milk pails on. He erects against the dairy a dead fence of thorn or brush wood, about two feet high and two feet thick, supporting it on the other side with a willow pole or rail, and short posts; and this answers every purpose of the more expensive frame work which is usually employed. Whatever simplifies labour and diminishes cost deserves to be commended.

At Stanford, in the Vale, some cheeses are made in the fanciful shape of a hare sitting in her form. They are sometimes coloured with sage.

Some of the dairy farms are large. Mr. Gearing, one of the Earl of Radnor's tenants in Coleshill parish, keeps about one hundred cows; but this is the greatest number I believe in the possession of one person. The usual number is between twenty and sixty; the last is reckoned a very considerable dairy. About ninety acres of good grass land will carry twenty cows.

It has been known that a farmer, with only half a dozen cows, has sometimes raised a family in credit; and it were to be wished that steady and diligent persons, who have been brought up as servants in dairies, had more frequently an opportunity of establishing themselves in small bargains.

Though several of Mr. Loveden's tenants have large bargains, and the same may be said of others, he has two tenants who keep each nineteen cows, that live in comfort, and probably will be able to provide decently for their families. It may be acceptable to give the rent and quantity of land of one of these minor farms.

Pasture

		A.	R.	P.		£.	s.	d.
Pasture—one ground		12	0	32	Rent	19	10	4
Do.	do.	16	2	2		26	8	4
Do.	do.	23	3	32		43	2	2
Arable		13	2	22		16	7	2
	Acres	66	1	8	£.	105	8	0

CALVES.

Many calves are bred for stock; but suckling for the butcher is the prevailing practice. In the eastern parts of the county, they are chiefly sent to London in carcase. Chalk or whiting is allowed them to lick. In other respects the manner of treating them presents nothing peculiar. "Suckling is declining about Hurst, as not being found sufficiently profitable."—Mr. Nicholls. Early calves are commonly devoted to the butcher, as fetching the highest price.

FEEDING.

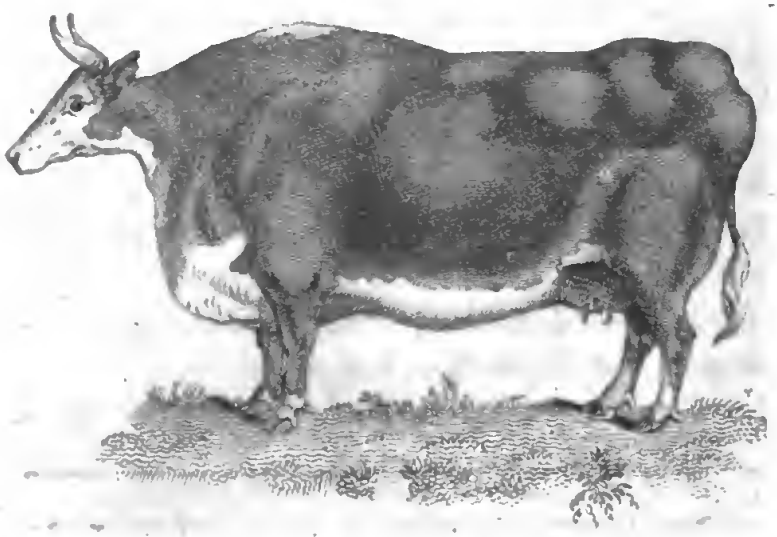
The Thames meadows in many parts are sufficiently rich to fat the largest Herefordshire oxen. Mr. Edmonds, who lives in Oxfordshire, but rents a considerable quantity of land both in Gloucestershire and Berkshire,* fats some of the finest animals of this kind that

* In order to shew the difference occasioned by fatting, a very fine Hereford cow, belonging to Mr. Edmonds, was drawn by Bennet of Woodstock, when poor, and again, when in a very advanced state of fatting, of which engravings are given. The contrast is great.

can

M.r Edmonds's Herefordshire Cow.

M.r Edmonds's Tal. Herefordshire Cow.



can be met with, if we regard size and make united. Edward Loveden Loveden, Esq., keeps a smaller size, but in all points excellent. The Scotch oxen bought by that gentleman have already been mentioned. He gives them all cut hay, which allows them more time for rest.* His ox pens are on the best principle, with regard to aspect and arrangement. One animal has it not in his power to disturb another. Shelter and cleanliness are united; and the dung is never wasted.

About six weeks before his fatting beasts are sold off, he mixes lintseed with the cut hay, which he finds to answer far better than oil cake. Both, however, are expensive; and the more animals can be brought forward by natural food the better.

Mr. Sherwood, of Purley, uses considerable quantities of oil cake in fatting cattle; and the same practice prevails in many other parts of the county. Its propriety, however, begins to be doubted.

Mr. Harbottle feeds cows with hay and turnips. The *ruta baga*, sliced, must be very nutritious.

Salt, if it were not so expensive, would be found of great utility in feeding. It is observed by Mr. Ashe, in his travels through the western parts of America, that where there are salt springs, all animals are fond of drinking and wallowing in them, and that the cattle of the farmers who supply this mineral to their stock, are 25 per cent. superior in value to such as do not enjoy this advantage. It not only tends to their general improvement, but also to their health.

Mr. Tompkins, of Abingdon, who lately had in his

* Mr. Frost, however, is of opinion that, though chaff cut by a machine is useful for horses, it is not good for oxen. Of course it is not the practice on his Majesty's farms.

possession

possession one of the largest oxen* that has been known in the annals of breeding, and which has since been exhibited as a natural curiosity, favored me with the following particulars respecting him, as well as in regard to his general mode of feeding cattle.

"Agreeable to your request when at Abingdon, I send you a brief history of my large ox, and the way he was kept, &c. I bought him of Mr. Warner, of Coventry, on the 8th of November, 1805, for the sum of eighty guineas, and sold him to Mr. Bostock of Bath, February 24, 1807, for one hundred and thirty guineas.

"The following measurements were taken of him by Francis Justice, Esq. who likewise painted him. Height 6 feet 6 inches; length from his nose to the top of his tail 13 feet 8 inches; over the hips 2 feet 7 inches; and from the knee to the ground 16 inches. He was of the short horned or Yorkshire breed, and was bred in Shropshire.

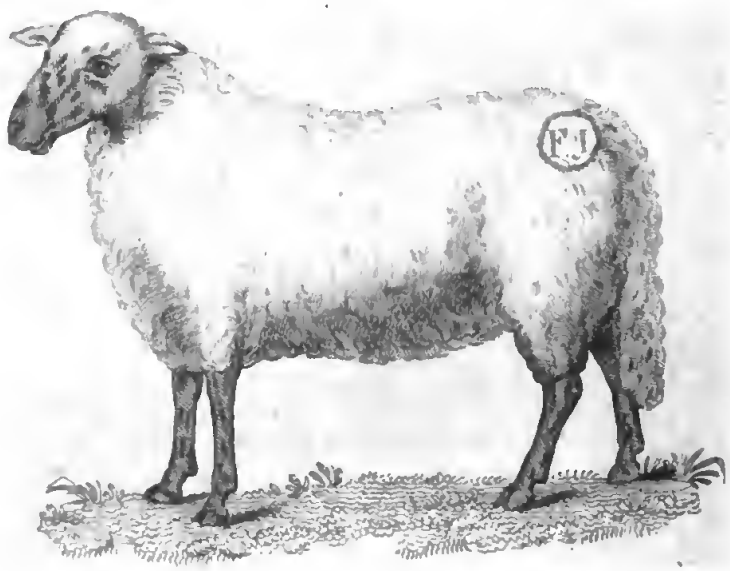
"When I first had him, he drank nearly a barrel of water per day, suppose on an average from twenty-two to twenty-four gallons. I kept him on barley meal and cut chaff, to which we added, for the last three or four months, about a pint of flax seed, after it had been boiled in about three times the quantity of water, when it becomes a jelly. This is the way I feed all my stall fed beasts, and find they improve much faster than on oil cakes, or any other way. I give them hay twice in the day, and barley meal and flax seed twice; and never let them have more at a time than what they eat up.

"I remain, &c.

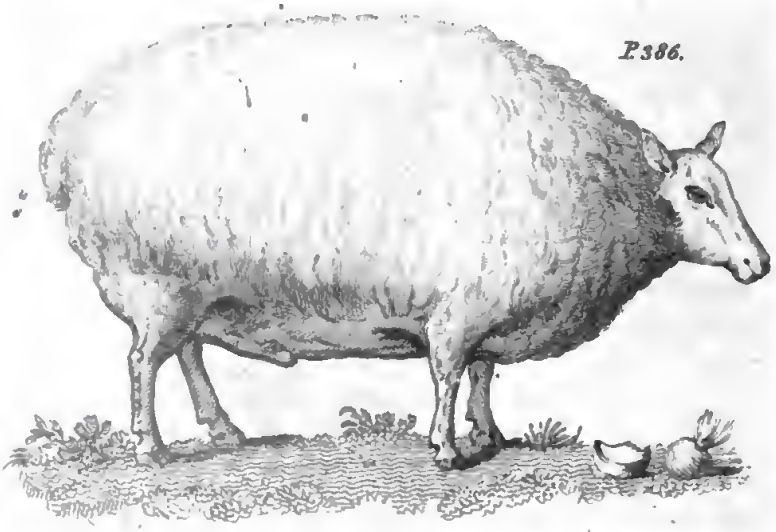
"JOHN TOMPKINS."

* See the print, from a drawing by Mr. T. Bennet, animal painter, Woodstock.

Berkshire. (Noll Wether.)



Mr. Edmonds's Shear Wether.



SECT. II.—SHEEP.

Berkshire * has a native breed of sheep, strongly marked, and though less valued than formerly, still acknowledged to possess many qualities which adapt them to their situation. The pure race, however, is not so commonly to be met with as many would be apt to imagine. By crosses, it has undergone several changes, though the characteristic features of the Berkshire notts, are not easily obliterated; and the name continues to be given to the various mixtures, as long as they have black faces, Roman noses, black or mottled legs, and long tails. The Berkshire nott wether, of which Mr. Justice favored me with a drawing, is strongly expressive of the genuine breed, which he was at some trouble to find. His accompanying observations I transcribe. "The peculiar qualities of the Berkshire nott seem to be its great size, height on the legs, and weight when fatted; and I cannot help thinking that this variety of sheep is well calculated for the *strong low lands* of this county, though the South down at *present* are much in *fashion*. A very considerable farmer in my parish has made the experiment this last winter. He tells me they do not answer his expecta-

* Luccock, in his book published in 1805, "On the Nature and Properties of Wool," calculates that Berkshire is stocked and produces of short wool as under:

No. of acres.	Stock per acre.	No. of sheep.	Weight of fleece.	No. of packs.
408,800	¾	306,600	3¾	4151

In his estimate of the number of acres, he is certainly too low, and this affects the whole of his calculations. It will give, however, a pretty accurate idea of the value of the Berkshire fleeces, as he values a pack of short wool at 15*l*.

tions,

tions, and that they are only calculated for *high dry lands*, and will not thrive well when confined so much within the hurdles, as they must be in our flat situations. The fineness of their wool, and its consequent superior price, seem to be the chief recommendations. I am inclined to think they must again give place to the larger kinds, at least in the Vale; as they cannot keep themselves sufficiently clean and dry during the winter season, to thrive as they should do."

Contrasting the native with the horned or Wiltshire sheep, I find some intelligent farmers agree as follows: "The Berkshire polled, or nott sheep, seem more particularly adapted to the low and cold lands, as they are proved to be more hardy for the fold, to fat sooner, and to be less liable to injury from the fly, than the horned sheep. The breed within a few years has been greatly improved. When fat, they vary as much in weight as from fourteen to forty pounds a quarter. The horned sheep, however, which are bred in the southern part of the county, are brought even to a greater size than the polled, or nott sheep."

The fleece of a nott sheep is not fine, and on an average, it will take eight of them to make a tod of wool. Even the flesh is considered as coarse; and indeed all large breeds of animals are in some measure liable to the same objection. Whether crossing the breed has improved it, is a matter still undecided among judges.* At the last meeting of the Berkshire Agricultural So-

* Mr. Smith, of Letcombe Basset, thinks that if a proper cross of the Berkshire sheep could be introduced, it would probably be better than a new race. The South down, he admits, have several advantages over the native Berkshires; but it is impossible they could walk without injury six or seven miles every day to and from the fold to the pasture, as is necessary among the White Horse hills.

ciety,

ciety, crossing breeds for stock was generally disapproved of. "Breed from the best natives," says Mr. Frost, "cross for fatting." The maxim appears to be founded in nature, and I give it without comment.

Crossing, however, is extremely common in this county; and they are between all the various breeds of sheep which have been introduced into it—between the notts and the Wiltshires, and between them and the Coteswold sheep; between the Leicesters and the Coteswolds, and the Wiltshires and the Leicesters; in short, the mixtures are as various as the tastes and fancies of their owners, or as the fancies of the sheep themselves frequently dictate.

There are flocks, however, of pure Leicester, South down, notts, horned sheep, Coteswolds, and some others, which will be noticed in the sequel. So strongly indeed was I impressed with the opinion, that I could not better discharge my duty to the Board, or render a more acceptable service to the public, than by trying to obtain collective information on this subject, that I drew up, and circulated pretty extensively, the following paper.

"Requested—A comparative view of the advantages and disadvantages of the different breeds of sheep kept in Berkshire, distinguishing their cost when bought in, the quality and value of their fleeces, and their improvement during any given time, whether sold as store, or fatted, with their respective weights when killed."

I am aware, that however desirable this investigation would be, it would require a train of experiments and observations, which few would be at the trouble of undertaking, and therefore it will not be the subject of wonder, that I was unable to accomplish my design.

I have

I have every reason to be grateful for the kind attentions I have received from almost every description of persons in this county, in the prosecution of my engagement; and the following letter will shew, that even on the particular subject to which I have referred, my enquiries were not wholly useless.

"*Remenham*, 18*th March*, 1808.

"SIR,

"When I had the pleasure of seeing you at my house, you left a paper with me to answer, viz. a comparative view of the advantages and disadvantages of the different breeds of sheep kept in Berkshire, &c. I am ashamed to offer an apology for having so long neglected, and I wish even now I could give you that information; but from my short residence in this country, I do not feel myself authorised to attempt to give you a comparative statement, as my flock are entirely confined to the Leicestershire breed, and I have not been able to collect sufficient information from the farmers to induce me to undertake it. If, however, you will allow me to confine my observations to the Leicester breed, with which I am more particularly acquainted, I will, with great pleasure, endeavour to give you a faithful statement of the average expences and profits of a Leicestershire wedder sheep; and provided you could get a like statement from any Berkshire farmer, who is in the habit of feeding other breeds, the object may be gained in this way. I am only sorry that I should have so long kept you waiting for an answer to the question, which in the end proves unsatisfactory.

"I will suppose a Leicestershire lamb to be bred on land

land worth 3*s*. per acre, about the beginning of March, which is the usual time; from this time to the latter end of July, when he is weaned, I should suppose his food (including the time he does not eat grass) to be 1*d*. per week, which, for 20 weeks, makes 1*s*. 8*d*. From this time, after weaning, he is put upon a clover fog, or lattermath, until the end of November, 16 weeks, at 2*d*. is 2*s*. 8*d*. He is then put upon turnips and hay until the latter end of March, 16 weeks, at 4*d*. is 5*s*. 4*d*. After turnips he is put upon young clover, where he is kept forward during the summer, and with the lattermath as before, to the end of November, making altogether 32 weeks, this I will estimate at 5*d*. per week, which is 13*s*. 4*d*. He is again put upon turnips and hay until the latter end of March, 16 weeks, at 7½*d*. per week, which makes 10*s*. He is then sold to the butcher, and the Dr. and Cr. will be as under. It may be necessary here to observe, that he is not fed with corn nor oil-cake, but merely the common mode of feeding necessary to make good and fair mutton; and by this mode of feeding I will give you an average weight, suppose there were 200 or more.

Dr.	*s*.	*d*.	Cr.	*l*.	*s*.	*d*.
First keep 20 weeks, at 1*d*.	1	8	First shearing 6lbs. of wool,			
Second keep 16 ditto, at 2*d*.	2	8	at 13*d*. - - -	0	6	6
Third keep 16 ditto, at 4*d*.	5	4	Second fleece 7½lbs. at 13*d*.	0	8	1½
Fourth keep 32 ditto, at 5*d*.	13	4	Carcase 120lbs. at 8*d*. per			
Fifth keep 16 ditto, at 7½*d*.	10	0	pound - - -	4	0	0
	1	13	0		4	14	7½

"I think, Sir, the above statement will be tolerably correct, though I think I have calculated low, than otherwise, on the weight of the carcase. With respect to the different breeds of sheep, I am decidedly of opi-

nion, that no one whatever can compare with the Leicester in point of symmetry, nor will make themselves so fat upon the same food in a given time.

"With great regard, I remain, Sir,

"Your obedient servant,

"GEO. HARBOTTLE."

The sanction given to Mr. Harbottle's favorable opinion of the Leicester breed, is confirmed by the practice of E. L. Loveden, Esq. C. Dundas, Esq. the Rev. F. C. Fowle, of Kintbury, and Mr. Wilde, of Speen, who have very fine flocks of this breed; though the former gentleman, and his opinion will have great weight, is likewise partial to the Cotcswolds, and their crosses with the Leicester. A beautiful ewe of this kind belonging to Mr. Edmonds, one of his tenants, has been drawn and engraved for the present work.

Mr. Selwood, of Aldworth, who has tried almost every breed of sheep, thinks there is less difference, in point of profit, between them, than is generally imagined. South downs he prefers on dry soils and downs; and Sir John Throckmorton, Bart. who has a capital flock of this kind, and the South down breeding stock on his Majesty's Norfolk farm, as well as the prevailing sentiment in favor of this celebrated breed, wherever the situation will allow, and sometimes from following the fashion, even where it is unpropitious, attest the superior value of these sheep. "There is no breed more hardy," says a Berkshire farmer, "or that stands folding better than the South downs. The lambs, as soon as weaned, are often put into a separate flock, and stand folding at that age very well."

In fact, the South downs seem to be admitted, on all hands,

hands, as extremely well adapted to the soil of a great part of this county; but in order to do all the justice in my power to a subject so essentially connected with the agriculture of Berks, and to furnish a memorial of the existing breeds, and the purposes for which they are kept, I shall give brief miscellaneous extracts from my notes, in some of the principal parishes of the different districts, beginning with the

VALE OF WHITE HORSE.

Buscot. Leicesters, Coteswolds, &c. Bred and fed. Mr. Loveden's a fine flock.*

Buckland. Sir J. Throckmorton. A capital breed of 500 South downs, whose fleeces require eight only to a tod; the average on poor land being nine or ten. Wool in 1806 worth 2*s.* 6*d.* per pound. A two-shear sheep, fatted, twenty pounds per quarter. In all respects found superior to the native notts.

Kingston Bagpuze. Berkshire notts. Chiefly for store.

Stanford. Berkshire nott sheep; some Wiltshires.

Uffington. Horned sheep principally, or crossed with the notts.

Sparsholt. Chiefly Wiltshires, or horned sheep, bought in, and sold out.

Childrey. Chiefly horned sheep; some notts.

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* Account of the quantity and produce of Mr. Loveden's wool.

	Fleeces.	Tod.	For six years.
In 1801	261	55	£. 79 8 6
1802	253	56	89 12 0
1803	806	64	103 12 0
1805	398	79	130 7 0
1806	403	83	136 19 0
1807	300	not weighed nor sold.	

Letcombe Basset. Berkshire notts most common.

Wantage. Berkshire notts only.

Ashbury. Horned sheep. About eight or ten fleeces to a tod. Lambs reared for stock. Some Coteswolds, crossed with the notts.

Faringdon. Berkshire notts. A few Leicesters, by particular gentlemen. Lambs partly for stock, and partly for fatting. Sheep bought in about Michaelmas generally fed off.

Denchworth. Wiltshires. Crossed by the Leicesters; preferred by Mr. Frogley.

Hanney. Berkshire notts. Store, chiefly.

Marcham. Native breed preferred. Principally store.

Abingdon. Berkshires. Principally for folding. Chiefly store. Some ewes and lambs fatted. Yean about the end of January, or early in February.

Drayton. Berkshire notts.

Milton. Berkshire notts. Few fed off, but only improved.

Harwell. Berkshire breed.

Brightwell and the Moretons. A mixed breed most common. Berkshire ewes crossed with a South down ram, begins to be very much used.

Wallingford. Berkshire and Wiltshires.

Streatley. South downs, common. Some Wiltshires. All store. A tod of South down wool worth 56*s*. Wiltshires 44*s*.

Cumner. Berkshires chiefly. Breeding, and for store. Some Coteswolds for feeding in the enclosed grounds.

Fyfield. Wholly native sheep.

Sutton Courtney. Chiefly the Berkshire breed. Folded, and then sold off, improved. Few bred.

Hagbourne. Berkshire notts. Kept for folding and store.

Radley.

Radley. County bred chiefly. Some Wiltshires crossed with a Leicester ram. A good breed for fatting. Many lambs and the dams fatted. Some fat 3 or 400 in a year.

Wytham. Berkshire notts. Store and breeding.

East Hendred. Berkshires. Some South downs kept by Mr. Allen, a very judicious farmer. Store chiefly.

East Lockinge. Wiltshires and Berkshires.

THE CHALK DISTRICT.

Lambourn. Horned sheep, or Wiltshires, preferred. Few notts. About eight fleeces to a tod. Flocks sometimes travel six miles a day, in order to be folded at night. A constant practice.

Great Fawley. Both Berkshires and Wiltshires. South down preferred.

Chaddleworth. Mostly Wiltshires.

Great Shefford. Wiltshires chiefly, and for store. A few fatted.

Boxford. Wiltshires chiefly, and for store. Not many fed.

Chieveley. Several mixtures. Several dealers in sheep live here, and accommodate their customers according to their respective tastes.

Peasemore. Wiltshires. Mr. Stevens has a capital breed of this kind, but thinks it too large. He is, therefore, about to reduce the size, by selecting small, but well shaped, rams.

West Ilsley. Mixed new Leicester and South down; a good cross in the opinion of Mr. Tull. Fat quickly. Yean about Candlemas. Reared for stock generally. A lamb at Michaelmas worth from 20 to 25*s.*; two years old 40*s.* Many kept as store.

East Ilsley. Berkshires and Wiltshires. Almost wholly

wholly store. Seven or eight fleeces to a tod. A quarter of a Wiltshire will weigh on an average twenty-eight pounds, of a Berkshire twenty-five pounds.

Aldworth. South down, Wiltshires, and some Berkshires. Commonly store. The South down thought well adapted for the neighbourhood.

Hampstead Norris. Chiefly Wiltshires. Some cross breeds. One between the Berkshires and the Cotswolds. A good stock. Wool, weight, and strength, all suit.

Pangbourne. Wiltshires, notts, South down, and mixed breed.

Basildon. South down, &c. Store and feeding.

Purley. Wiltshires and South downs mixed. Bought store, and fatted off.

Remenham. Many notts, or native sheep. Mr. Harbottle's a Leicester breeding stock.* Others buy in tegs to fold on the land. Some Dorset ewe with lambs are fed off.

Hurley. South down prevail, but Wiltshires thought preferable by Mr. T. Micklem on a long drive.

Bisham. Chiefly South down. Wiltshire ewes crossed by a South down ram. Lambs yeaned about Christmas, and generally sold off about Easter for the London market. Will fetch from two to three guineas a piece. Sheep bred, fed, and for store.

Cookham. Nearly the same as Bisham. It is thought that no lambs answer so well to fat as a cross between the South down and the Wilts.

VALE OF THE KENNET.

Hungerford. South downs, horned sheep, and

* See his letter.

notts.

notts. A Leicester ram with a South down ewe, reckoned a good cross.

Kintbury. The common breeds chiefly; but it is with pleasure I insert the following extract from a letter with which Mr. Hoyte, land surveyor of Speen, had the goodness to favor me.

"The breed of sheep most in repute in this county some years back, was the Berkshire nott, and the Wiltshire horned; but both of them at this moment are rapidly giving way to the South down, or at least what are termed such. The new Leicester, at present, have made but little progress, being confined to a few select flocks only; and these, I believe I am correct when I state, are chiefly produced from rams hired of the Rev. Fulwar Craven Fowle, of Kintbury, whose flock, it is only justice to state, would rank high, if minutely examined, in the estimation of new Leicester breeders, even in those midland counties, where the greatest emulation and spirit have long been displayed, and whose judgment in this pursuit has been solely directed to produce that complete symmetry and proportion, so essentially requisite to promote inclination, and aptitude to fatten at an early age.

"Mr. Fowle's flock, I believe, had their first origin from very choice ewes, purchased by him at Lord Sherborne's sale some years back; and since that period have been progressively improving, by rams of the first standard, from time to time, taken of the most spirited adherents to the Dishley blood. The Rev. Mr. Wilde, of Speen, purchased at Lord Sherborne's sale some ewes, and since has had some of Mr. Fowle's draft ewes, and, I believe, invariably used rams from his flock, the produce thereof are constantly folded in very poor cold arable

arable land, till put to fatten, at which period the quickness of their thrift, and the size they attain, astonish those who are unacquainted with the excellence of this breed.

" Charles Dundas, Esq. of Barton court, also purchased some ewes at Lord Sherborne's sale, and has at this time a large flock from that blood. The Rev. Mr. Sawbridge, of Wickham, has hired rams for some years of Mr. Fowle, and, I presume, from the sheep I have seen him make choice of, that his flock must be in a progressive state of improvement."

The flocks mentioned by Mr. Hoyte, are indeed very fine, and no doubt are well adapted to their situation; but the Leicester sheep will not bear driving like the notts, the horned sheep, or even the South down, and therefore they are most proper for enclosed farms and rich pastures.

Inkpen. Wiltshires, Berkshires, Hampshires, and some South down. The same may be said of West Woodhay and Shalbourne.

Hampstead Marshall. Nearly as in Inkpen. Chiefly store. Bought in commonly about Michaelmas, and sold again at Lady-day.

Enbourne. Chiefly Wiltshires.

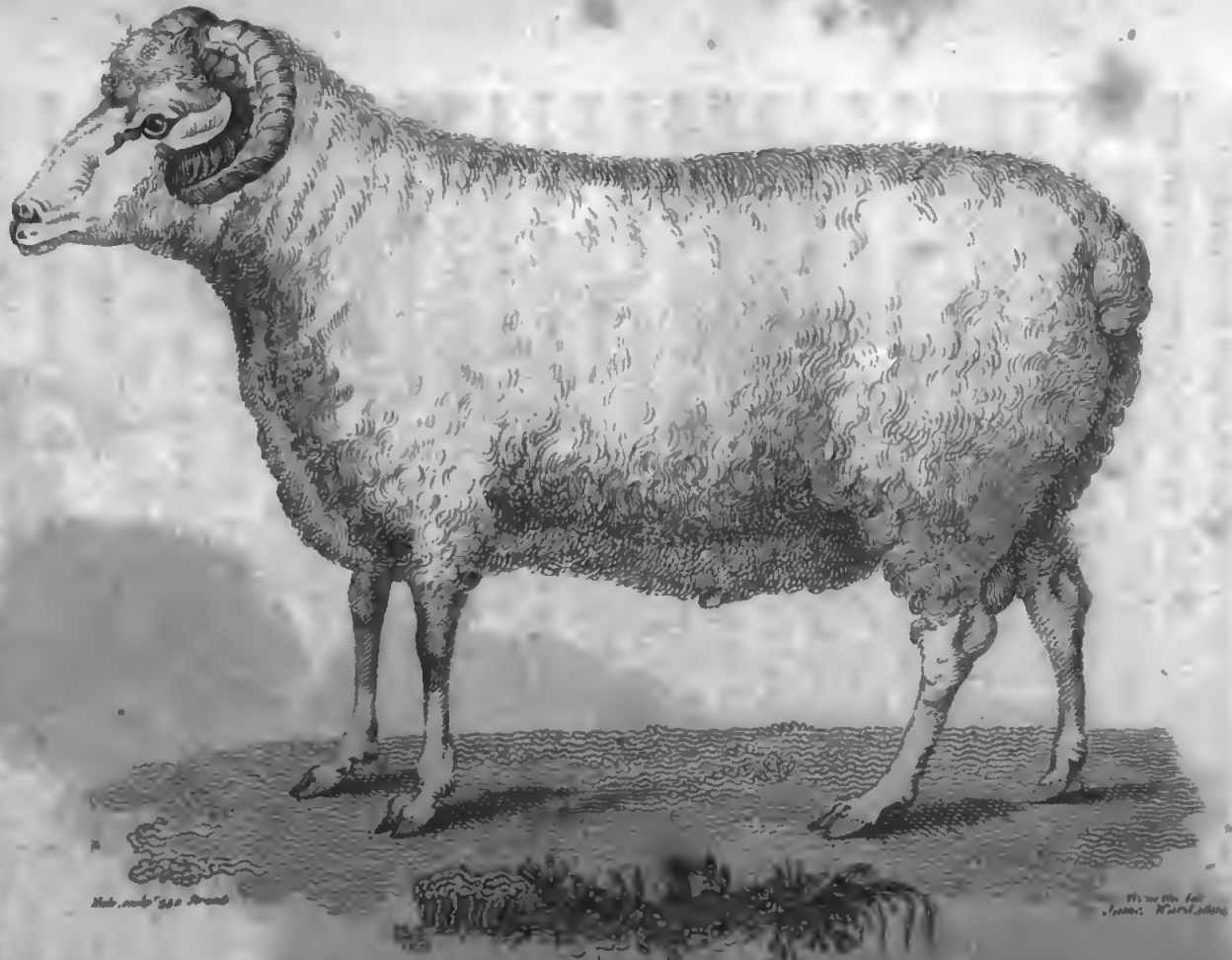
Speen. The same, except Mr. Wilde's flock, and some South down.

Newbury. Notts, Wiltshire horned sheep, and many Hampshire horned sheep.

Thatcham. South down, some mixed with Wiltshires, for breeding, store, and feeding.

Sulhampsteads. South down, mixed with Wiltshires. Ewes and lambs fed. Lambs sold off by June, ewes by August.

Englefield,



SPANISH or AMERINO RAM.

True blood. No. 20. from which Sheep Lord Somerville's Merino Stock of the three last years has been [illegible] Imported direct from Spain in 1802

Englefield. South down, some Leicesters.

Aldermaston. South down, crossed by various breeds. Store commonly bought in and fatted. Few bred.

Wasing. Some Dorset ewes with lamb, for fatting. Both commonly.

Ufton. The common breeds in the neighbouring parishes. Dr. Beeke, however, has a fine Merino ram, which cost thirty guineas, and the only one I saw in the county, as his Majesty's Merino sheep are now removed from the Little Park at Windsor; though it ought never to be forgotten that it was owing to the zeal of our most gracious Sovereign to promote the interests of his people, that this valuable breed is now put into the hands of a considerable number of persons, who seem duly sensible of its importance. His Majesty's first flock was imported in 1792. Other nations got the start of us in this respect. The fine woolled Spanish, or Merino sheep, were introduced even into Sweden in 1723, and have since increased to many thousands. In France they abound; and in various parts of Germany they are not uncommon. In this country, they are spreading, by the effects of an annual sale of his Majesty's superfluous flock. The horns of the Merinos are of a middle size, of which the ewes are sometimes destitute; faces white, legs of the same hue, and rather long; shape not very perfect, having a piece of loose skin depending from the neck; bone fine; pelt fine and clear.

The wool of the Merino sheep is uncommonly fine, and weighs about three pounds and a half per fleece. It is not found to be deteriorated in our climate. The fleeces have a dark-brown tinge on their surfaces, which is formed by dust adhering to the greasy yolky property of its pile; and the contrast between it and the rich

rich white colour wethers, as well as the rosy hue of the skin, strike at first sight with surprise.

Dr. Beeke has crossed with the Merino breed and the Devonshire ewes; but he prefers the Ryelands, and by this time he probably will have his Merinos advancing to perfection. He considers five crosses as necessary for that purpose; and therefore justly concludes, that the wool of the first cross can only be reasonably expected to be worth about 7*d.* per pound more than that of the maternal stock, on the supposition that it will, in five crosses, be worth 3*s.* above that of the Ryeland ewe, making an advance of about 7*d.* in each cross.

He is of opinion, that exaggerated accounts, and ill grounded hopes, are likely to damp the public spirit, in regard to this valuable breed of sheep. If the wool, when the Merinos are mixed with our most esteemed native breeds, does not gain its requisite degree of fineness in less than five crosses, it is unreasonable to expect the full price for it at one cross. It is a fact, however, that the animal is improved by a mixture with the Ryelands, and that the wool will not ultimately be found inferior to that of the Merino stock.

Reading. Dorset ewes, for forward lambs. South down, crossed with the Leicester, Wiltshire, and native breeds.

In some of the neighbouring parishes a similar breed is kept.

Sunning. South down. Wiltshires for store and fatting. A few bred for fatting.

FOREST DISTRICT.

Bray. Horned sheep, notts, and South downs. Various crosses.

Clewer. South down. Forest sheep, or heath croppers, as they are vulgarly called; a small breed, ill shaped

shaped, and of little value, but producing very sweet mutton. They abound in the parishes which lie within the precincts of the Forest of Windsor. A quarter will weigh from twelve to fourteen pounds. About thirteen fleeces make a tod. The wool of equal value with the South down.

Windsor, Old and New. In Chap. XII. will be found a particular account of his Majesty's flocks, &c.

Sunninghill. Forest breed chiefly.

Winkfield. Forest sheep common. Many bred. Wethers sold off to fat.

Warfield and East Hampstead. Nearly similar.

Binfield. South down; ewes for breeding; lambs sold fat. Greensward sheep, a breed somewhat larger and better than the heath croppers. All sheep in the Forest very liable to rot, from the uncultivated and neglected state in which the lands lie.

Oakingham. South down. Forest and Greensward sheep mixed with the South down. Many bred. Some buy in ewes to lamb, and fat both off. From ten to twelve fleeces of the Greensward sheep will make a tod.

Arborfield. Mostly South down. Store and breeding.

Finchampstead. South downs, mixed with the Forest breed.

Shinfield. Many dealers in various breeds of sheep reside here.

Hurst. South down. Native breed. Few bred. The meadows lying low, they are liable to rot. Generally bought in tegs, and after being folded one year, are fattened upon turnips.

Lawrence Waltham, &c. The breeds the same as in the neighbouring parishes.

The great mart for sheep is Ilsley. See Chap. XV.

FEEDING.

Sheep are fatted as in the other midland counties, most commonly on turnips and hay, or on good natural pastures. In some parishes, however, oil cake is given them. Mr. Stone, of Englefield, uses considerable quantities for this purpose. About Purley, too much oil cake is used in fatting sheep, as well as cattle. In the latter parish, the Wiltshires and South down crossed, are frequently bought store, and fatted off by Mr. Sherwood. Bought in about Michaelmas, and again in the spring. In six months fit for the butcher. Some, however, are kept eighteen months, and shorn once. They have oil-cake allowed them for the last six or eight weeks.*

SECT. III.—HORSES.

The native Berkshire horses are of the common black race, very strong, and powerful, and rather of full proportions than tall. In their legs they are pretty short, in their bodies thick, and their whole figure indicates strength rather than activity. More, however, are bought

* Sheep, as well as black cattle, are liable to blow, or be hoven, when they eat too succulent food. About Ashbury, I am informed by Mr. Brown, numbers are killed annually. Keeping them in motion, and taking care that the dew is off before they are put into rich keep, is perhaps the best preventive. For cattle that are hoven, the following receipt has been much commended in France. It is the discovery of Richardott. Give to the animal the twentieth part of a pound of gunpowder, mixed in a pint of milk, when first seized with the colic, from eating grass or clover highly charged with dew. It seldom fails to operate a cure. For sheep, half the quantity of powder would be sufficient. No farmer ought to be without some sensibly written book on the diseases of cattle. Perhaps Downing's is the best.

in

in, from Northamptonshire, &c. as suckers, than are bred. A colt will cost from 12 to 15*l.* and at a proper age will sell for 60 or 65*l.* Many are purchased for the use of the drays in London; and others, after working three or four years on the farm, are sold to the proprietors of stage waggons.*

Near the forest, and large commons, we find a poor starved breed, scarcely applicable to any useful purpose, but which, nevertheless, are kept by as many as have the power and ability, lest they should lose one iota of their privileges.

From the advanced prices which many of the larger horses fetch, it has frequently been considered as a source of profit to the farmer to breed or rear them. The fact, however, I apprehend, will be otherwise. No animal is raised at so great an expence, and none is so liable to casualties, which sometimes render him perfectly useless.

On the number of horses used for the common purposes of agriculture, many strictures have already been hazarded. If four are frequently put to a plough when two would be sufficient, it certainly argues wealth rather than wisdom in the agriculturist. If again horses are employed when oxen would answer the purpose, the individual perhaps may console himself, that he has a right to please himself, but the public, nevertheless, have reason to complain.

It has been calculated by Mr. Pearce, that 12,000

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* Among his Majesty's horses at the Great Lodge is a small Arabian stallion, called the Hampton Court Arabian. "This horse," says Mr Frost, "is about 13 hands 3 inches high, and notwithstanding the smallness of his size, if put to a large roomy mare, he gets horses 16 hands high, and full of bone, capable of carrying 20 stone a fox hunting." Blood horses kept to proper mares, produce a breed equally valuable for the field, the road, the carriage, or agriculture.

horses

horses are kept in this county for the purposes of agriculture only, and that one-third of the number might be saved by the use of more improved implements. These 4000 supernumerary horses, at a moderate estimate, will require at least as many acres of land to support them;* and the land necessary for the maintenance of 6000 persons is thus occupied unprofitably. But if we further consider, that oxen might often supersede the use of horses, to a degree that would allow the 12,000 to be diminished more than one half, we shall have still greater reason to censure a practice which is equally inimical to the farmer and the public.

When more than one team is kept, certainly oxen may in most situations be partially used. To prejudice I concede so far as to admit, that one team of horses may be desirable on every farm,† though on his Majesty's farms every kind of work is performed by oxen. The vicinity, however, to a town, and to a navigable river, renders distant carriage unnecessary, and therefore facilitates their use.

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* A gentleman of the first respectability in the county, informed me, that the fifteen horses used on his farm consumed last year 732 bushels of oats, 16 of beans, and 12 of pulse. This may seem a very high allowance, being at the rate of 50 bushels per horse; but on a moderate calculation, 30 bushels per annum for each horse are necessary to keep him in good condition.

It has been recommended, and I think on rational grounds, to give horses that have sufficient time to feed, their oats in the straw. One half might be saved by this practice, and no small portion of hay, as well as the expence of threshing. The hay and oats might be mixed, or both might be coarsely cut into chaff. The horses would unquestionably be more healthy, if fed in this manner.

† The *first* teams, as they are called, which may be seen every market day at Newbury and Reading, are a most wanton expence. These pampered animals seem only intended for pomp and parade; and the *first* carter, who attends them, is probably equally useless. But why, it will be asked, may not state horses be kept for a waggon as well as for a coach? I confess the question is not easily answered.

"The

" The rational and frugal mode of using oxen," says Mr. Pearce, " is but little followed in this county. Indeed the greatest part of Berkshire is that kind of soil which is inimical to their hoofs, so that they cannot be recommended, except in some parts of the Vale of White Horse, and the clay lands at the eastern and southern extremities of the county.

On this, a Berkshire gentleman remarks, " why not shoe them? Oxen must, I think, be more eligible than horses, because I am pretty certain that four oxen in a proper plough will work any soil fit to be cultivated, and do as much labour as the same number of horses, and employ only a man and a boy."

" Wherever the land is adapted for the use of oxen, having few flints, they are entitled to the preference, as they are kept at much less hazard and expence." *

" As the Vale is chiefly open field, there are many parishes unfit for oxen. Having so much wet land, oxen cannot be used there so well as horses." †

Having thus impartially stated the arguments which have been adduced, both for and against the use of oxen, as far as their applicability to agricultural purposes is concerned, I feel it my duty to mention in what situations ox teams are employed in this county. Their number is not great, though it is probable, indeed, I may have missed some.

Sir John Throckmorton, Bart. of Buckland, keeps three ox teams, and finds them answer. Soil stone brash, loam, &c.

An ox team is kept at Radley. A strong wet soil.

Several are kept at West Ilsley. A chalky soil in general. It is declared, however, that the expence is considerable, for want of grass land to maintain them.

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* A gentleman of the Down district.

† A gentleman of the Vale of White Horse.

Mr.

Mr. Stacey, of Abingdon, keeps several teams. A rich loam and gravel.

In the insulated parish of Shilton, a stone brash soil, Mr. Pinnel, Mr. Bagnall, Mr. Gillet, and several other farmers, plow with oxen, four at length, not the most favorable mode of employing their strength, and use one-wheel and two-share ploughs. Mr. Pinnel may be reckoned among the best farmers in Berkshire or Oxfordshire, to the latter of which he more immediately belongs.

Mr. Peter Green, of Crookham, near Newbury, works spayed heifers, four to a plough, in harness. Soil various. They are found to be more nimble and active than oxen. Had not beasts been proved to be beneficial, Mr. Green is too intelligent a man to have persevered so long in their use.

From this brief enumeration of soils and situations, where ox teams are now used, it will appear, that they embrace nearly all the varieties in the county; and that there are no natural impediments which perseverance and habit might not be able to overcome, in regard to the employment of oxen.

COMPARISON OF HORSES WITH OXEN.

Oxen have superior advantages over horses, in being purchased and kept at a less expence, in being exempted from many diseases to which horses are liable, and in case of lameness, in being capable of fatting for the butcher. They likewise, when kept for agricultural purposes, have a natural tendency to increase the quantity of flesh meat at market, and to diminish the consumption of corn and hay. In both ways they operate to furnish a supply of provisions at a moderate rate, to an increasing population, and yet bring the farmer a greater balance of profit, by lessening the expences which horses must ever entail on him.

To

To horses they are inferior in journies, in draught, in harrowing, and some other occupations on the farm, or the road. Their strength is likewise less; and an allowance of three oxen to two horses is reckoned a fair proportion. But horses, though they may yield an increased profit, if bought in young, and sold out when at their prime, must, in the hands of some person, be deteriorating after that period; and barring accidents and diseases, to which they are so liable, in the course of a few years are only fit for dogs,* after having been kept at an expence sufficient to support several human beings, during the same time.

But as maxims of political economy are much less likely to have any influence than the conviction of individual interest, I subjoin a comparative view of the advantages of oxen over horses, in point of expence, with which Mr. Frost, his Majesty's bailiff, favored me.

WINDSOR GREAT PARK.

1797.—A statement of the number of horses necessary to do the work in the park and farms, with their keep and decrease in value.

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* "An unreasonable prejudice in the people of Great Britain against the eating of horse flesh, occasions this different destination of these animals, and it is the means of compelling the farmer to part with his horse for a guinea, which otherwise might be fattened, and sold for ten or twenty. It would be as laudable to remove such a prejudice, as it would be impolitic to urge the general use of oxen for the purposes of draught."

Middleton's Report of Middlesex, p. 484.

I do not mean to enter the lists with this able agricultural writer, but if he is really convinced that an old horse, well fattened, would make agreeable food, his *own* example in eating it would assist to remove the *prejudice*, the existence of which he seems to lament. The *reductio ad absurdum* may be either applied to him or to me, according to the judgment of the reader.

	£.	s.	d.
Sixty-five horses fed with oats 52 weeks, allowing each horse for the time eight quarters, at 1*l.* 2*s.* 6*d.*	585	0	0
Hay for each horse 26 weeks one load and a half, at 4*l.* per load	390	0	0
Straw for each horse one load, at 1*l.*	65	0	0
Grass for each horse 26 weeks, at 1*s.* 6*d.* per week	126	15	0
Shoeing each horse 1*l.*	65	0	0
Decrease in value* each horse 2*l.*	130	0	0
	1361	15	0

1797.—A statement of the number of oxen necessary to do the work in the park and farms, with their keep and increase in value.

	£.	s.	d.
One hundred and seven oxen fed with hay, 26 weeks, allowing each ox one load and a half, at 4*l.* per load	642	0	0
Straw for each ox one load, at 1*l.*	107	0	0
Straw, in their cribs, 26 weeks, at 9*d.* per week each	104	6	6
Grass for each ox 26 weeks, at 1*s.* 6*d.* per week	208	13	0
Their increase in value 2*l.* each	214	0	0
	847	19	6
Balance in favor of the oxen in one year	513	15	6
	1361	15	0

The above is a fair and impartial statement.

J. Frost.

* To this part of the calculation, objections may be made. Till a horse is six years old he is increasing in value. The presumption must have been, that he was past his prime, when the estimate would indeed be too low.

Mr.

Mr. Frost further adds, "I hope, by your perusal of the ox account, you will see the great advantage of working of oxen. I am clear in my opinion, that if oxen were properly attended to, we should be able to maintain one-third more people in England, and feed them with more animal food."

SECT. IV.—HOGS.

Whatever may be said of the Berkshire native breed of sheep, the hogs of this county deserve, and have obtained, unqualified approbation from the best judges; and those who wish to improve their breed of swine, are desirous, from the most distant parts of the island, to obtain one of the genuine Berkshire race, which, for compactness, aptitude to feed, and the size they will reach, are not inferior to any that can be named.

But excellent as the Berkshire swine undoubtedly are, they are usually crossed at intervals with the Chinese, or Tonquin race. Mr. Smith, sen. of Letcombe Basset, who has studied the breed of native animals for many years, assured me that it was necessary to cross the Berkshire swine once in six or seven generations with the Indian race, or they would degenerate in shape and qualities. Change he thinks necessary both in animal and vegetable nature. He has likewise used a half wild boar to improve the breed, which has answered his best expectations. The cross with the Chinese, however, is most common from his Majesty's farms at one extremity of the county to Mr. Loveden's at the other.

FEEDING, &c.

The piggeries, particularly in the dairying tract, are a principal appendage to the farm. That of Mr. Loveden is on a large scale, and by a convenient arrangement, much trouble is saved. A pitched court, surrounded with buildings, divides it from the dairy; and in order to supply the pigs with whey, &c. the servant has only to cross the court, and pour the fluid through a trough in the wall, which communicates with the stye; and yet neither the sight nor the smell can be offended by the vicinity of the two dissimilar but connected appendages.

This gentleman uses potatoes, boiled in large quantities, which he thinks preferable to baked.* In one year, likewise, his pigs consumed 93 bushels of barley, 261 of beans, and 291 of pulse. Except among the dairies, corn and offal are most commonly used.

Mr. J. Westbrook, of Bisham, feeds hogs in an early state with potatoes, baked in an oven. Ten bushels may be baked for 8*d*. He thinks the potatoes much more nutritious in this form.

In the eastern part of the county, many hogs are annually fatted with barley, peas, and beans. Mr. Robert Hewett, of Barkham, fattens in this manner between 2 and 300 every year.

Mr. R. Tull, of Chamberhouse, feeds his hogs with Swedish turnips, chopped, and barley meal and beans.

Pink Lee, Esq. of Woolley-green, Cookham, gives them whole beans and Swedish turnips.

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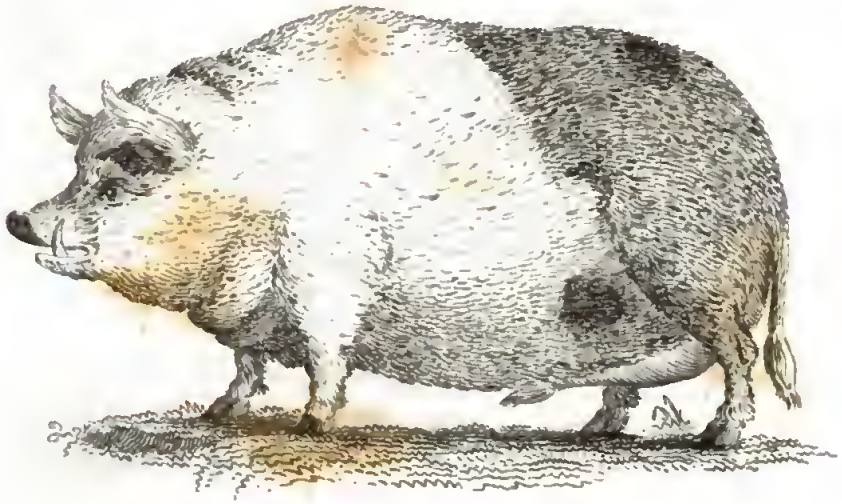
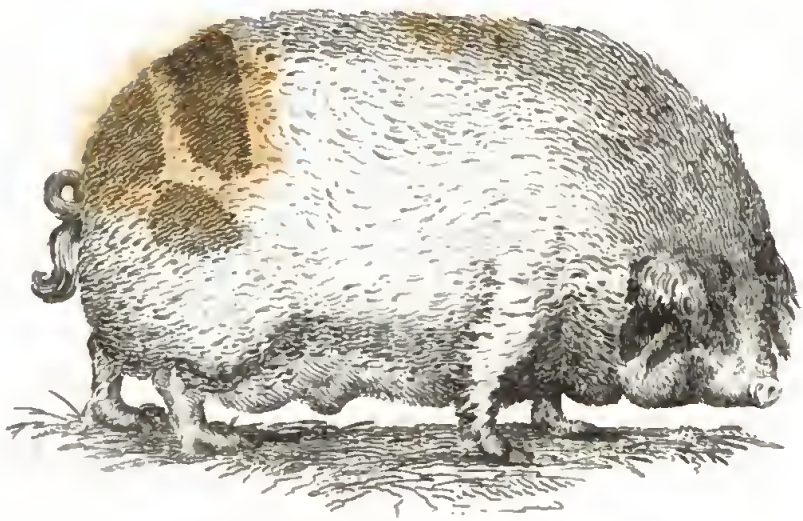
* Baked potatoes he considers as best adapted for feeding oxen and poultry, and to this use they are applied by some.

If

M.r Chas.s Butler's Berkshire Hog



M.r Loveden's Berkshire Hog



If grains are pressed down, and kept six months, they undergo a kind of fermentation, and are much more serviceable than when fresh. This is the practice of Mr. Nicholls, of Hinton-house, who also collects the shells of the ruta baga, after the sheep have done with them, and carts them to the yard for his store pigs, to which they appear to be as grateful and nutritious as corn. With a little barley, peas, or beans, they wonderfully promote their growth and fatness.

Except, however, in the dairying tract, hogs are not considered as profitable, further than their dung. An intelligent farmer in the parish of Hurley, assured me that if they would clear their own expences, he should be satisfied with the dung for his profit. A less expensive mode of fatting them might surely be adopted. The quantity of barley, beans, and peas they consume, either whole, or ground into meal, is certainly enormous. When carried to a great weight, no doubt this may be required.

Mr. Loveden's hog, of which a print is given, was an extraordinary animal, though only twenty-eight score. One killed at Tidmarsh-farm, near Pangbourne, in 1797, and belonging to Mr. Charles Butler, weighed 40 score 11 pounds. It was 8 feet long, 9 in girt, 3 feet 7½ inches high, and was 11 inches in fat on the shoulders. The general run, however, is from 10 to 15 score.

CURING.

The greatest part of the pigs slaughtered in Berkshire are made into bacon. About 4000 are killed at Faringdon alone, between Michaelmas and April.*

* See Chap. XV. Faringdon.

They

They are cured in the usual way, and dried, in proper store rooms, with wood or coal. Mr. Loveden's bacon-house is furnished with a stove and flues, heated by a coal fire. A very useful contrivance.

Much in farm houses is likewise smoke-dried in the chimnies with wood; but this is impossible on a large scale. Smoke-dried bacon, however, is supposed to have the finest flavour.

SECT. V.—RABBITS.

Rabbits abound in many parts of Berkshire, but they are not commonly considered as an article of profit. In East Hampstead park, on the downs, which are well adapted for them, in woods and plantations in general they are plentiful, and are frequently destroyed as nuisances. Out of the skin, however, which is of some value, they are worth from 18*d.* to 2*s.* a couple; and as an article of food, of which many persons are fond, they find a ready sale. At the same time, they afford amusement to minor sportsmen, and furnish food for foxes, which would otherwise prey on game and poultry. It may indeed be necessary to restrain them, on account of their astonishing fecundity; but to attempt to extirpate them, even if it were possible, cannot, for the reasons assigned, be politic or advisable.

George Elwys, Esq. of Marcham, has a rabbit warren, which is well stocked. It has likewise been stated to me, on what I consider as competent authority, for I had not the pleasure of finding the gentleman at home, that Exuperius Turner, Esq. of Challow, near Wantage, has a breed of white tame rabbits, by which he clears a large sum annually. Their skins, which have lately

lately been much used in trimmings, sell for a good price; and even their dung he finds very beneficial on his extensive farm.

I regret that I have it not in my power to describe the manner in which they are fed and kept. To almost every enquiry connected with the object of my pursuit, whether personal or by letter, I have met with the most liberal and prompt replies; but some failures must be expected from accidental causes, without any imputation of neglect on my part, or reserve on that of others.

SECT. VI.—POULTRY.

It is acknowledged, that the consolidation of farms, among other ill consequences, has diminished the quantity of poultry, and consequently enhanced the price. The gentleman, the yeoman, and the capital rack renter, may sometimes rear enough for the supply of their own tables; but it is an object beneath their notice to produce a supply for the public.

The business, therefore, of breeding poultry for the market, is either left to the cottager, whose means and opportunities are limited, or to the little tradesman and farmer.

Eggs too, from the same cause, are much dearer than formerly; and yet, when we consider the amazing demand and consumption, it is only wonderful they should be procured on any terms. In every part of the county, however, the supplies are pretty abundant, though rather high, of both poultry and eggs; and as fowls are the least expensive of all kinds of live stock to a poor man, he should be encouraged to profit himself and the public.

public, by keeping as many of them as his situation will permit.

A gentleman of the Vale of White Horse, to whose comprehensive mind nothing is too great, and to whom no object connected with the farm appears too little, favored me with an inspection of his bailiff's book, from which I made the following extracts, on the produce of the poultry yard. It was a year's account.

	£.	s.	d.
1293 eggs, at two for 1*d.* -	2	13	10
166 fowls, at 3*s.* per couple	12	9	0
31 ducks, at 4*s.* 6*d.* per couple	3	9	9
22 geese, at 5*s.* each -	5	10	0
34 turkies, at 7*s.* 6*d.* each	12	15	0
	36	7	7

The estimated price is much lower than the average of markets in general; but it will furnish some criterion of the comparative value of domestic poultry.

In the neighbourhood of Oakingham, cramming fowls is a lucrative branch of trade, as may be seen under that town, Chap. XV.

In the eastern part of the county, many geese are reared on the commons; and the poor make considerable advantages by them. They are principally sold to dealers for the London market.

SECT. VII.—PIGEONS.

Berkshire contains a considerable number of dove cots. Not only gentlemen's seats, but many farms are provided with this appendage.

As pigeons as frequently plunder their neighbours

as

as their owners, they will generally prove advantageous to their possessors; but it is to be questioned, if, on the whole, they do not consume as much as their produce is worth.

From the account book quoted in the last section, I took the following extract, in regard to the profit of a dove-cot.

	£.	s.	d.
147 pigeons used in the house, at 5s. per dozen - - - -	3	1	3
550 sold at - - -	10	15	10½
	13	17	1½

The dung of pigeons is a strong and valuable manure, and may be estimated at one-fourth of their returns per annum.

SECT. VIII.—BEES.

Except by gentlemen fond of observing the habits of this little interesting insect, few hives of bees are kept by the higher classes. Sir William East, Bart. of Hall-place, has long been celebrated as an apiarist; but as profit is not his object, I forbear to enter into details.

In the gardens of middling farmers, and more especially in the gardens of moderate tradesmen and labourers, we frequently find a few hives, seldom a dozen in one place; though few kinds of stock would be so productive, without incurring any expence.

A poor man, near Abingdon, in one year cleared 27*l.* by his bees. At West Ilsley, hives have been found to contain forty pounds of honey; but this is considered

dered as a very extraordinary quantity, and only to be expected under favorable circumstances.

In the Forest district, bee-hives are pretty plentiful. "About Newbury," says Mr. Bicheno, "bees are not very productive, as a stock seldom yields more than twelve or fourteen pounds of honey. I followed a plan which promises to be advantageous to the apiarist. On the first of August, when the fields were barren of flowers, I removed two new stocks into the garden of a cottage on Greenham common, which was covered with the heath, just in flower. The bees found here new stores; and on the 1st of October the one had increased nine pounds and a half, and the other, which was a weak stock, five pounds; a very considerable addition for the time of the year, and this part of the country."

This practice is common in Scotland, and probably in England, where heath abounds.

SECT. IX.—DEER.

I do not know that I should mention deer, as none, I believe, are reared for sale; yet an animal, whose two haunches and sides are worth 7*l.* when five or six years old, would not be unworthy of the attention of those who have convenient keep for them, even on the score of profit.

Windsor Great Park contains about 2500 fallow deer, and 300 red deer. There are likewise deer parks at Hampstead Marshall, Lord Craven's; Buscot Park, Mr. Loveden's; Hall-place, Sir W. East's; and Park-place, the Earl of Malmsbury's. I have reason to believe that some other gentlemen in the county keep deer, but I cannot particularize them all.

SECT.

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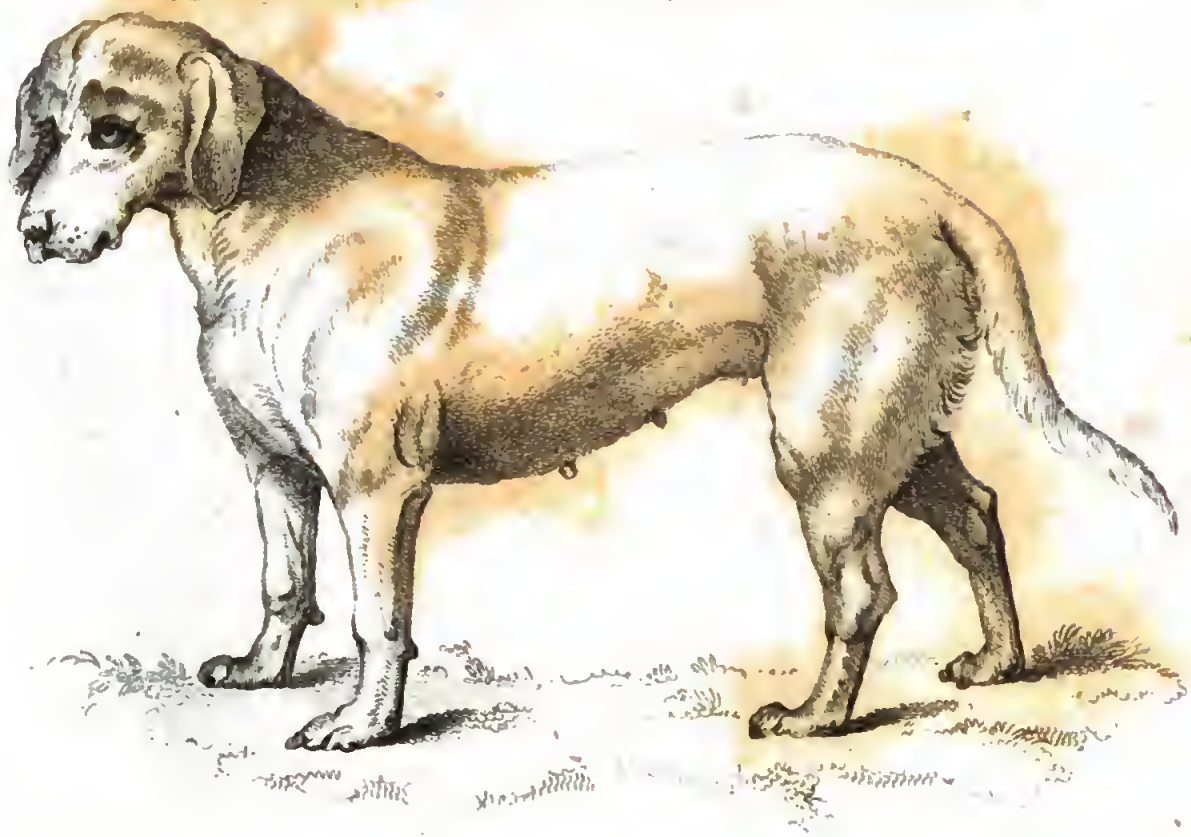
Mr. Lowden's Danish Blood Hound



Neale sc.

SECT. X.—DOGS.

The shepherds' dogs in this county possess all the vigilance and sagacity of their kind. Other breeds of dogs it does not fall within my province to notice; but on account of its beauty and rarity, I cannot forbear mentioning a female blood-hound from Denmark, where the race is almost extinct, belonging to E. L. Loveden, Esq. of which, as a Berkshire curiosity, an engraving is given.

CHAPTER XIV.

RURAL ŒCONOMY.

SECTION I.—LABOUR, AND LABOURERS.*

IT is a common complaint that labourers do the less the better they are paid, and that in proportion as the price of necessaries increase, they become more indifferent about supporting themselves, and the more clamorous for parochial relief.

I admit there may be much truth in the reflection; but still it is not universally applicable. There are numbers in this county, and I trust in every county in the kingdom, whose only wish it is to eat the bread they earn, to enjoy a comfortable cottage, and those accommodations which honest and persevering labour justly entitles them to possess. If there are exceptions too numerous to be either palliated or defended, let us lament the errors of human nature, and exert ourselves to correct them. A better education—a kinder attention—a more anxious endeavour in their superiors and employers to see them happy, and to encourage them when their conduct was praiseworthy, would infallibly produce many good effects. The man whose most in-

* Under COTTAGES, HARVEST, HAY MAKING, and the POOR, will be found many facts and observations, which I conceive are more properly placed than under this section.

viting

viting prospects are only the simplest necessaries for himself and his family, while he is able to work, and a work-house, or a parish allowance when he is sick, or grows old, can have little ambition to excel, and little inducement to waste his strength, beyond what he can possibly help. The measure of money in this country is unfortunately the standard by which every thing is tried. We consider ourselves deficient in no duty, if we barely pay the wages we have contracted for, and furnish our quota towards the poor-rates in aid of the necessitous or the old. But surely encouragement, advice, and instruction are required at our hands, towards those humble dependents who toil in our service, either as domestics or labourers. The risk of ingratitude should not check our zeal to serve them, the chance of deception should not render us indifferent to their interests.

Instances are not infrequent of those who have been kindly treated, repaying the obligations they are under by a zeal and fidelity, which would do honor to the most cultivated minds. I have seen servants whom their master's generosity has established or forwarded in life, worthy by their conduct to be ranked among friends, and shewing an attachment, sometimes stronger, alas! than the ties of blood, or the obligations of duty in others. The examples are in my eye in the county I am now reporting; and I trust there are many of a similar kind that have not fallen under my cognizance.

But though it is impossible for a master, who employs numbers, to extend his particular attention to all, even if they deserved it, it is no more than his duty to advise and direct, even where he cannot otherwise assist. Want of œconomy is a natural consequence of having no hopes of being able to overcome the pressure of circumstances;

cumstances; and improvidence is as often the attribute of ignorance as of vice. There are many unexpensive but essential services, which superiors may render to their inferiors. They may suggest the means of doing for themselves, what must otherwise be done by the public. They may warn from dissipation, which in every situation is injurious, but in the poor must be fatal; and they may with little trouble draw out a scheme of income and expences, which few would disregard, if they were convinced it flowed from a wish for their welfare. They may paint in its true colours the consequences of inebriety and frequenting the ale-house, of being dishonest or idle, and of indulging themselves or their families in the superfluities of tea, &c. &c. when more wholesome and more nourishing beverages might be obtained at half the expence. To the advice which appears to flow from a heartfelt desire to serve, few will turn an unwilling ear.

Though the wages of agricultural labour are increased at least one-fourth within the last ten years, they are still inadequate to support a family, without driving a man, on every emergency, to the parish for assistance. The policy of reducing a poor man, if he is honest and industrious, to this state, I could never see.*

---

* A professional gentleman of this county says, "the comfort of the labouring poor is certainly an object of the first magnitude. I am one of the advocates for Queen Elizabeth's law, which enacts that no cottage shall be built on any waste where less than four acres of land are laid to it; and I could wish to see a law obliging every occupier of land to let his constant labourer share with him so much land as would produce sufficient vegetables, and the keep of a cow. Cottages with or without land should be the rewards or punishments of industry or idleness."

Perhaps it would be better to oblige the farmer to supply his constant labourer with a certain quantity of milk. See POOR, Chap. XV. Sect. VII.

A day

A day labourer is paid from 9*s*. to 12*s*. per week, according to situation: the more remote from the metropolis, and from towns, the lower the wages in general. In towns, a labourer will sometimes have 14*s*. per week allowed him. A woman will occasionally earn 3*s*. or 4*s*., and a boy from 2*s*. to 3*s*. 6*d*.

In HARVEST and HAY MAKING time, the wages, as will be seen under those sections, are much more considerable; and enable the poor man to pay his rent, or to obtain some fuel or clothes.

Those who work by the great, a practice very general in every kind of labour that will admit of it, and which the farmers liberally encourage, will earn from 15*s*. to a guinea per week; and at some kinds of employment, even 4*s*. 6*d*. and 5*s*. a day. Such persons are generally the least expence to a parish. They work indeed early and late; but they find they can live by their toils, and are content.

The plan, adopted by his Majesty, of allowing labourers flour at a fixed price, whatever wheat may sell for, is most benevolent and judicious. I was happy to find that a few gentlemen farmers had in some measure fallen into the same praiseworthy practice, which I trust will extend more and more. One supplies his labourers with bread at a certain moderate price, proportioned to the wages paid; another allows so much milk daily to the families of his dependents; and a third allots a potatoe ground, or some equivalent advantage, which operates as an encouragement to industry and fidelity.

Mr. Harbottle, of Remenham, allows his hind, or carter, a house, a cow, a pig, and 7*s*. a week. The practice is copied from the north: it ought to be general. The chief carter, or bailiff, or by whatever name

name the superintendent in the master's absence is called, deserves to be rewarded for his vigilance, and to partake of the comforts he secures. If every labourer cannot have an establishment of this kind, on every principal farm, one or two certainly might. Competition would thus be excited; and all but the most worthless would be striving to deserve, and hoping to obtain, a share of domestic comforts, and a little independence, suited to their stations.

The hours of labour in summer, are from six to six, and in winter, from seven to five. Half an hour for breakfast, and an hour for dinner, are usually allowed. Some are too apt to trespass further: to come late, and to go away early. But the idle deserve no encouragement: it is the frugal, the industrious alone whom it is possible to serve.

Farmers in general keep no more servants in the house than they can possibly help. A carter is paid from nine to twelve guineas a year; an under carter from four to seven guineas; a shepherd from eight to ten guineas, and the run of a few sheep; a boy from two to three guineas; a dairy maid from five to ten guineas, according to her qualifications; a house maid from five to seven guineas. Servants in towns are paid still higher wages: and gentlemen's domestics frequently have salaries far beyond the services they perform.

It is greatly to be lamented, that good servants every year become more scarce and difficult to be found. The best domestics used to be found among the sons and daughters of little farmers; they were brought up in good principles, and in habits of industry; but since that valuable order of men has been so generally reduced in every county, and almost annihilated in some, servants are of necessity taken from a lower description

of

of persons, and the consequences are felt in most families. This is one of the many ill effects arising from a monopoly of land.

SECT. II.—PROVISIONS.

Bread, the staff of life, is usually at as moderate a price in Berkshire, as in any of the neighbouring counties; and with a liberal attention to the wants of the poor, the magistrates apportion the parochial allowance according to its value. In times of comparative plenty, this may be less necessary to be attended to; but yet it is the best criterion, under all circumstances of the times.

The annexed Table for FARINGDON and WANTAGE DIVISION, will shew the justice, and the application of the principle; though we trust that, by the blessing of Providence, and our own exertions, it will never more be necessary to recur to estimates so high as those to which the Table is carried.

A TABLE, shewing the Prices of Bread per Gallon, and the weekly allowance to each poor Family.

Price per Gallon.	Single Man.	Single Woman.	Man and Wife.	Man and Wife and 1 Child.	Man and Wife and 2 Childr.	Man and Wife and 3 Childr.	Man and Wife and 4 Childr	Man and Wife and 5 Childr.	Man and Wife and 6 Childr	Man and Wife and 7 Childr	Man and Wife and 8 Childr.
s. *d.*	£. *s.* *d.*	£. *s.* *d.*	£. *s.* *d.*	£. *s.* *d.*	£. *s.* *d.*	£. *s.* *d.*	£. *s.* *d.*	£. *s.* *d.*	£. *s.* *d.*	£. *s.* *d.*	£. *s.* *d.*
1 0	0 3 0	0 2 0	0 4 0	0 5 6	0 7 0	0 8 6	0 10 0	0 11 6	0 13 0	0 14 6	0 16 0
1 1	0 3 2	0 2 1	0 4 3	0 5 10	0 7 5	0 9 0	0 10 7	0 12 2	0 13 9	0 15 4	0 16 11
1 2	0 3 4	0 2 2	0 4 6	0 6 2	0 7 10	0 9 6	0 11 2	0 12 10	0 14 6	0 16 2	0 17 10
1 3	0 3 6	0 2 3	0 4 9	0 6 6	0 8 3	0 10 0	0 11 9	0 13 6	0 15 3	0 17 0	0 18 9
1 4	0 3 8	0 2 4	0 5 0	0 6 10	0 8 8	0 10 6	0 12 4	0 14 2	0 16 0	0 17 10	0 19 8
1 5	0 3 10	0 2 5	0 5 3	0 7 2	0 9 1	0 11 0	0 12 11	0 14 10	0 16 9	0 18 8	1 0 7
1 6	0 4 0	0 2 6	0 5 6	0 7 6	0 9 6	0 11 6	0 13 6	0 15 6	0 17 6	0 19 6	1 1 6
1 7	0 4 2	0 2 7	0 5 9	0 7 10	0 9 11	0 12 0	0 14 1	0 16 2	0 18 3	1 0 4	1 2 5
1 8	0 4 4	0 2 8	0 6 0	0 8 2	0 10 4	0 12 6	0 14 8	0 16 10	0 19 0	1 1 2	1 3 4
1 9	0 4 6	0 2 9	0 6 3	0 8 6	0 10 9	0 13 0	0 15 3	0 17 6	0 19 9	1 2 0	1 4 3
1 10	0 4 8	0 2 10	0 6 6	0 8 10	0 11 2	0 13 6	0 15 10	0 18 2	1 0 6	1 2 10	1 5 2
1 11	0 4 10	0 2 11	0 6 9	0 9 2	0 11 7	0 14 0	0 16 5	0 18 10	1 1 3	1 3 8	1 6 1
2 0	0 5 0	0 3 0	0 7 0	0 9 6	0 12 0	0 14 6	0 17 0	0 19 6	1 2 0	1 4 6	1 7 0
2 1	0 5 2	0 3 1	0 7 3	0 9 10	0 12 5	0 15 0	0 17 7	1 0 2	1 2 9	1 5 4	1 7 11
2 2	0 5 4	0 3 2	0 7 6	0 10 2	0 12 10	0 15 6	0 18 2	1 0 10	1 3 6	1 6 2	1 8 10
2 3	0 5 6	0 3 3	0 7 9	0 10 6	0 13 3	0 16 0	0 18 9	1 1 6	1 4 3	1 7 0	1 9 9
2 4	0 5 8	0 3 4	0 8 0	0 10 10	0 13 8	0 16 6	0 19 4	1 2 2	1 5 0	1 7 10	1 10 8
2 5	0 5 10	0 3 5	0 8 3	0 11 2	0 14 1	0 17 0	0 19 11	1 2 10	1 5 9	1 8 8	1 11 7
2 6	0 6 0	0 3 6	0 8 6	0 11 6	0 14 6	0 17 6	1 0 6	1 3 6	1 6 6	1 9 6	1 12 6

Overseers are requested to attend to what an industrious family *might* earn, and not to what the idle and negligent *do* earn.

Bacon, which is almost the only kind of meat that a labourer is allowed to indulge in, except occasionally, varies much in its price. I was informed last autumn, by Mr. Mattingley, of Faringdon, that it might be purchased from Bristol, in quantities, at the rate of 6*d.* per pound; and that Irish bacon, from London, might be had a halfpenny at least cheaper. In the country, it was 8*d.* on an average. The cottager, however, frequently keeps his pig, and as far as it goes, it is a real advantage to him.

At Wantage, one of the cheapest towns in the county, beef and mutton average 7*d.*, lamb 7½*d.* and early 8*d.* or 9*d.* per pound.

Faringdon is somewhat higher at times, but not much. The same may be said of Abingdon.

Reading market, from its situation, is frequently a penny per pound dearer. Newbury on the whole is moderate, and rather cheap. If we may judge from the charges at the inns of Windsor, meat must be extravagantly dear; but it probably is not more so than its vicinity to London justifies.

Cheese made in the county, of late years, has seldom been lower than 6*d.* per pound, nor higher than 8*d.* Butter varies much with the season and situation; and its general use will ever assist to prevent other provisions from becoming cheap. It runs from 1*s.* to 1*s.* 6*d.* per pound. A tax upon its consumption would operate as an encouragement to the growth of corn. Cheese in a great measure supplies the place of meat to the labourer; but butter is only a luxury in any situation of life. But this is not the only unnecessary and expensive article in which all ranks indulge. To the poor, in particular, those licensed poison shops where spirituous liquors are sold, and the prevailing use of tea,

are most injurious to health, morals, and comfort; and yet cost them more than substantial viands and a wholesome beverage.

SECT. III.—FUEL.

As no part of Berkshire is now above twelve miles, or thereabouts, from some navigation, the supply of coals is regular, and they may be purchased, on an average, at about 1*l.* 10*s.* per ton. The Severn and Isis canal, connecting with the Gloucestershire and Welsh collieries; the Thames from London, the Kennet and Avon, and the Wilts and Berks canals, bringing coals from Somersetshire, all unite to occasion a competition, and to keep down the price. Add to this, the Oxford canal, which has hitherto supplied a large portion of the Vale of White Horse; and it will appear that, for a county rather remote from coal pits, Berkshire may be considered as peculiarly favored.

Still, however, coal is too expensive for the generality of the poor, and it is fortunate for them that in most districts they have cheaper resources. Where they have not, it is an excellent plan for parish officers to lay in a quantity of coals at a cheap and convenient time, and to sell them out without profit to the poor, in small quantities, during winter. This would not only be an act of humanity, but would save hedges and coppice woods, which are often plundered from a real or alledged necessity, to prevent their families from perishing with cold.

In the Chalk district, the poor burn underwood, furze, stubble, and where near the Kennet, peat.

In the Vale of the Kennet, peat is the common fuel of

of cottagers. It costs 12*s*. or 13*s*. per load, at the pits, and will yield about twelve bushels of ashes, which being home burnt, as it is called, will sell for 7*d*. or 8*d*. a bushel; when what is burnt in the open air, and is of a more mixed nature, will only fetch 5*d*. or 6*d*. A load, with good management, will serve a poor family for a year: a load and a half is an ample allowance. Even with that firing, it will not stand a family in more than 10*s*. or 12*s*. a year.

In the Forest district, turfs are commonly cut and burnt. This occupies too much of the time of the poor, and perhaps is a loss rather than a benefit. Some burn turfs beyond what is necessary for their domestic consumption, in order to make a profit by the ashes.

In the Vale of White Horse, bean stubbles are frequently used as a fuel by the cottagers, who sell the ashes for manure. About Wantage, where there is a very capital tan yard, old tan is burnt. Underwood and faggots are likewise used, and portions of coal, in all parts of the county where the resources are not more ready, and less expensive.

CHAP.

CHAPTER XV.

POLITICAL ŒCONOMY, AS CONNECTED WITH, OR AFFECTING AGRICULTURE.

SECTION I.—ROADS.

ON the facility of communication, and consequently the goodness of the roads, not only the comforts of residence, but agricultural improvements and advantages materially depend. Few places in this county are above three miles from some good turnpike road; yet it is necessary to limit this commendation of *good*. Indiscriminate censure or praise is generally unjust. If much has been done, much more might be effected towards the improvement of the public roads, as the materials are generally excellent, and the revenues ample. Throughout the greatest part of Berkshire we find fine gravel, flints, or calcareous stone near at hand; and it is therefore the fault of the trustees if the roads are not put and kept in the most perfect repair. But in many places, even in the line of the great roads, they are not sufficiently raised in the middle, the water tables are neither regularly made, nor with proper outlets towards the ditches; and the ditches themselves are not scoured, or the hedges cut, where it might be equally beneficial to the roads and to the contiguous grounds.

In some places, I believe the baneful practice of letting the roads by contract per mile prevails. Where this

this is the case, the contractor will do as little as he can help for his money; he must naturally be expected to make a profit by his engagement; and that neatness, which is so cheap under a better system, and those improvements which mark attention, and are so delightful to the eye of the traveller, are either wholly neglected, or but slovenly performed.

On some of the roads which are sufficiently public to demand and reward a liberal expence, there is even a deficiency of mile-stones,* or they are illegible, without the same trouble as decyphering a decayed monument. Finger posts are too frequently wanting at cross roads; and the entrance of villages are often without their names, or the distance from the next stage. In some districts, however, I have to record with pleasure the attention of the trustees to the public in this respect; and I should have been happy if I could, consistently with my duty, have withheld any animadversions. They are, however, made generally, and may serve to stimulate exertion, without wounding the feelings of individuals.

From long observation, and taking an active part in the management of a particular road of great travelling, I am convinced that the only effectual means of improving or keeping up roads, is to have an honest and intelligent surveyor, at a suitable salary, whose business it is to superintend the whole line, to pay the labourers, to call out the statute duty, observe the directions of the commissioners, and to be responsible to

* In a pamphlet lately published by Mr. Dawes, will be found a novel, but useful proposal of erecting cottages at the end of every mile, which would at once enliven the road, render travelling more pleasant, and accommodate a number of persons with comfortable residences, as land for gardens might generally be had in such situations.

them.

them. It is proper, likewise, that he should have a kind of foreman, at the increased pay of 1*s.* 6*d.* or 2*s.* extra per week, over every groupe of four or five men along the road, who is to labour with them, to see that they do their duty, and to report from time to time to the surveyor, whose utmost vigilance will often be ineffectual without such assistance. I have seen the beneficial effects of this plan, both as to the quantity of labour performed, and the mode in which it is done, and I humbly beg leave to recommend it where it has not hitherto been acted on.

The principal public roads are as follow:—The London road to Oxford enters this county at Maidenhead bridge, and passing through the Vale of Hurley, and running about nine miles over a country presenting a succession of beauties, quits Berks at Henley bridge. At Dorchester, in Oxfordshire, it again branches off to Abingdon, and passing through Fyfield, Kingston Bagpuze, Faringdon, and Buscot, quits the county at St. John's bridge, near Lechlade, about the seventy-fifth mile-stone, and is continued to Cirencester, and thence towards Bath. On the west of Oxford city, by Botley causeway, a road leads by Cumner Hurst towards Faringdon, and near Tubney falls into the preceding; and at the point of meeting, another road branches off to Wantage. At Wallingford, a branch of the London road to Oxford, enters this county, and passing through Brightwell and Harwell, goes on to Wantage, from whence there is a continuation through East Challow, and Stanford in the Vale, to Faringdon. From Wantage there is likewise a communication with Hungerford, through Chaddleworth and Great Shefford; and also another along the foot of the White Horse Hills towards Ashbury.

A turn-

A turnpike road from Lambourn to Newbury, passes along the side of the Lambourn stream through East Garston, the two Shefords, Welford, Boxford, and Donnington.

The road to Winchester, Southampton, and Portsmouth, from Oxford, enters this county at Folly bridge, in the suburbs of that city, and passes through Abingdon, Drayton, Steventon, East Ilsley, and Beedon, to Newbury, about three miles beyond which it enters Hampshire. A road to Wantage leaves this about two miles beyond Steventon, and passes through Wantage and West Shefford to Hungerford, as already mentioned.

The road from Oxford to Chichester enters Berks at Shillingford bridge, and passes through Wallingford, Moulsford, Streatley, Basildon, Pangbourn, and Englefield, to Aldermaston, a little beyond which it enters Hampshire. From Pangbourn, a turnpike is carried through Purley to Reading; and a road from this last named place to Basingstoke passes through Swallowfield, and soon after quits the county.

The longest line of road, however, and the most frequented, is the Bath road, which makes a digression from the Oxford road, a little to the west of Maidenhead, and passing over Maidenhead thicket, through Twyford to Reading, follows nearly the course of the Kennet by Newbury to Hungerford, where it quits Berks about the sixty-fifth mile-stone, having run through the county nearly forty miles.

Besides this great road, however, there are three other communications between Reading and London, and consequently with other parts of the country. One of these enters Berks at Windsor Great Park, and runs through Winkfield and Binfield; a second, not long since

But improvements are rapidly going on, and gentlemen will in time be convinced, that good roads are essentially connected with good farming.

SECT. II.—NAVIGABLE RIVERS AND CANALS.

RIVER THAMES.

Berks, though an inland county, has peculiar advantages in respect to its navigations. The river Thames, which forms its boundary on the north and north-eastern side; the river Kennet, and the Kennet and Avon canal, which pass through the most southern parishes for nearly three-fifths of its extent; and that part of the Wilts and Berks canal, nearly executed, within its limits, on the north-west, have precluded the necessity of projecting any future increase of navigations within the county. Upon inspection of the map, it will be perceived, that in the western division of it, no part of the area of the triangle formed by the Thames on the north-east, by the Kennet on the south, and by the Wilts and Berks canal on the west, is distant more then twelve miles from water carriage; and in the east and south-eastern parts, when we consider that the Basingstoke canal is carried in a line nearly parallel to, and only about eight miles distant from its southern boundary, we find in that division of the county no place more than twelve miles distant, either from that navigation, the Thames, or the Kennet.

Of all these navigations, the first in importance is the river Thames, almost the whole of whose navigable stream, not within the jurisdiction of the corporation

of

of the city of London, washes the borders of this county in a circuitous course of nearly 105 miles. For neither Lechdale, to the west, where it first becomes navigable, nor Staines, to the east, where the city jurisdiction commences, are far from the limits of Berkshire.

The antiquity of the navigation of this river may be traced beyond any records of parliament, to the reigns of Henry II. and III., at which time it appears, that barges (*naves**) brought down wood for firing from the upper part of the Thames to London. For the passage of these barges, a custom or toll, called "avalagium,"† was paid, which having been farmed, appears to have been part of the royal revenue.

A custom of this kind existed under the monarchy of France, and for the abolishing or commuting of which we find various plans suggested in De la Lande's "Canaux de Navigation," folio, 1778. The use of the Thames for navigation certainly existed, previous to any artificial means of fishing on it. The contrivances for catching fish, by erections in the bed of the river in a diagonal line across the stream upwards, called in the older statutes "Gors," (whence the word *Gore* or *Weir*) seemed to have been a growing evil, and was declared such, and positively forbidden by Magna Charta, and the removal of them enforced by frequent

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* Madox. Hist. Exchequer, folio, p. 531. "Osbertus de Brai reddit computum de consuetudine navium per Tamizam." 19 Hen. II.—Ibid. p. 578. "The king's treasurer for the time being, resident in the exchequer of old custom, (*ex antiquâ consuetudine*) has been used to receive by the hands of the sheriff of Berks a good barge load of fire wood (*unam bonam navatam buscæ*) or LXs. for the said firewood. 51 Hen. III.

† Ibid "Pro remanente firmæ *avalagii* Tamisæ: 41 Hen. III. Avalagium is derived from the verb *avalare*, in mari aut fluvio deorsum navigare." See Ducange Glossarium in verbo *Avalare*.

subsequent

subsequent statutes.—25 Ed. III. cap. 4.—45 Ed. III. cap. 2.

As the mills found the extension of these "gors," or mill-dams, (which seem synonimous) of great utility; and as the retention of water by their means was equally beneficial to the navigation, provided a temporary passage could be made by an opening in them, a kind of compromise appears to have taken place; and the barge masters paid an acknowledgment to the owners of these weirs or mill-dams, for the convenience thus afforded to the navigation. Imperfect as this mode of navigation was, by which the barges, descending with great velocity, acquired sufficient momentum in their passage through the opening, to float over the shoal which existed always below the deep waters, just under the weir, and over which they, in going up the river, were hauled by the united aids of men and machines; this practice continued, in many instances, to a very late period, and in one, namely, at Blake's lock, below Reading, so late as the beginning of the present century. In the twenty-first year of James I. an act of parliament passed for rendering the Thames navigable from Oxford to Buscot in Berkshire. Subsequent statutes* were enacted, to regulate the price to be taken, and to prevent impositions at the weirs, now called *locks*, or, *old locks;* but in 1772, a material alteration took place in the system of the navigation, and in the mode of its management, which upon the whole has been productive of the most beneficial improvements in that part of the river under our present consideration. About that time, the trade on the river, from the general prosperity of the country, was gradually and rapidly in-

* 6 and 7 W. III. cap. 16.—3 Geo. II. cap. 11.—24 Geo. II. cap. 8.

creasing,

creasing, and the flattering success of many lately executed canals, suggested the plausible scheme of a canal from Reading to Isleworth, that would have reduced the distance between those two places, which is seventy-seven miles by the circuitous course of the Thames, to forty-four, or thereabouts.

But many owners of lands adjoining the river, dreading the diversion of the trade, and foreseeing, what probably would have been the case, that the disuse of the navigation would occasion a much longer continuance of floods, obtained an act of parliament (11 Geo. III. cap. 4, 5.) enabling certain commissioners thereby appointed, to borrow a sufficient sum to erect pond-locks, and to pay the interest and repairs, from the tolls collected at them.

The commissioners consist of the magistrates of the cities and towns, and of gentlemen residing in the counties, adjoining the banks of the river, possessed of 100*l.* per annum in real, or 3,000*l.* in personal estate, who hold general and district meetings from time to time, and from place to place.

This navigation from London to Cricklade is divided into six districts. The *first*, which by the act 14 Geo. III. is placed wholly under the jurisdiction of the city of London, extends to the city stone above Staines bridge; the *second*, from Staines stone to Boulter's lock, above Maidenhead bridge; the *third*, from Boulter's lock to Maple Durham, above the entrance of the Kennet; the *fourth*, from Maple Durham to Shillingford, in the county of Oxford; the *fifth*, from Shillingford to Oxford; and the *sixth*, from Oxford to Cricklade.*

* From the Report of a Committee of the House of Commons, in 1793, of which E. L. Loveden, Esq. was chairman, much important information may be gleaned on the subject of the Thames navigation.

The

The commissioners have power to borrow 75,000*l.* for the above purposes, to regulate the depth of the water, to remove nuisances and obstructions, to make horse-towing paths, and to enact bye-laws, for the better carrying on the navigation. In pursuance of the power granted by the above, and subsequent acts, the sum of 60,800*l.* has been borrowed; twenty-six pond-locks erected; and an almost uninterrupted horse-towing path completed, throughout the whole distance.

With the addition of the tables in the Appendix, the following will form what may be called a statistical account of this part of the river.

From Lechlade to Staines stone, the distance is 108 miles, the fall being 225 feet; and as the fall from Staines to the tide-way at Brentford is 45 feet, the total height of Lechdale above the sea appears to be about 270 feet.

The weirs, staunches, or old locks, are in number thirty-two; the pond-locks twenty-six. The pond-locks from Lechlade to Oxford, or Oseney inclusive, are 110 feet in length, and 14 feet in breadth, capable of receiving barges of the burthen of 70 tons; and from Oxford to Windsor they are 120 feet in length, and 18 feet in breadth, capable of receiving barges of 150 tons; but barges of this extreme dimension are generally disused, the largest which are now navigated, and which are generally called *Newbury* sized barges, being 109 feet in length, and 17 in breadth; burthen 128 tons, and drawing 3 feet 10 inches.

The construction of these barges* is almost univer-

* The number of barges registered by the surveyor of upper districts of the Thames navigation, as constantly or occasionally trading on that part of the river, amounted in 1805, to 195, and their tonnage was 15,037 tons.

sally

sally the same, being flat-bottomed, with a rounded head; and as this form is nearly as capable of making speedy way through the water as any other, and as it does not prevent the barge from being shoved sideways off the shoals, an inconvenience attending vessels whose heads are differently constructed,* it does not appear that any improvement, consistent with the carriage of the greatest possible quantity of goods within the dimensions of the locks, can be made in the shape of the largest barges; though there is no doubt, but that the smaller barges may be improved in their construction.

It is obvious, however, that vessels of this description do not easily obey the helm, and therefore the steersman is assisted by bargemen, who, with large ashen poles, from 14 to 19 feet in length, with incredible dexterity, keep the barge in the proper navigable channel. The occupation of a bargeman requiring not only strength and activity, but considerable experience and local knowledge, is very lucrative. The number of persons requisite to work the largest barges, is six men and one boy. One of the men, who has the care of the vessel, and who defrays the tonnage, &c. is called cost-bearer, or captain. With the stream downwards, these barges of 128 tons require only one horse, with which they travel after the rate of three or three and a half miles in the hour; but against the stream in the upward passage, from 8 to 14 are necessary, according to circumstances.

The tonnage paid at the pond-locks, which is limited by act of parliament to fourpence per ton, but which has seldom exceeded threepence: although it should

* On the subject of the forms of the heads of vessels, see "Report of the Committe for conducting the Experiments of the Society for the Improvement of Naval Architecture."—Table III. Part 3.

seem

seem to be due on the downward, is generally, for convenience, paid on the upward passage, and is levied according to the registered tonnage of the barge. A rule is established by usage, that a barge returning upwards must give way to a downward barge, the latter being understood as on its passage to a market.

In fact, previous to the consumption of Newcastle coal, which has increased with the increasing price of timber, the barges returned upward with little or no lading; and coal is still the great dependence for upward freight, which even now is not equal to half the downward, in point of bulk.

The commissioners, in order to encourage a quick return, allow a drawback of one half the tonnage taken at the pond-locks, on barges returning quite empty, and of one quarter of the tonnage, on those returning only half laden.

The exports from the country adjacent to this river consist of corn, wool, timber, and woodland produce. Corn is conveyed principally in its manufactured state, as flour, meal, or malt; there being many considerable mills seated on the river, and supplied by its stream. The principal mills subservient to manufacturing purposes are the Temple copper mills, near Marlow, and several paper mills, seated on the short but rapid stream of the Wye, which flows into the Thames, at a little above Cookham, and below Marlow. Beech in timber, plank, and billet for the bakers in London, and various other uses, makes a large proportion of the downward trade, from the Oxfordshire and Buckinghamshire wharfs.

From Lechlade and Abingdon are sent considerable quantities of cheese, the produce of the rich pastures

of Gloucester and North Wiltshire, as well as of the dairying parts of Berks.

The imports, or upward freight to the above places, consist of those commodities which now form so large a proportion of the necessaries and comforts of a British population—Such are the productions of the East and West Indies, the Baltic, the Mediterranean, and the South Sea, through the port of London. Newcastle coal is conveyed upwards as far as Abingdon and Wallingford; but at these places, and at Reading, its consumption is now limited, by the Staffordshire coal brought down the Oxford canal, and by Shropshire and Welch coal brought down the Thames and Severn canal. There are, however, express statutes to prevent coal, brought down the Oxford or Wilts and Berks canal, from being carried down the Thames lower than Reading. No kind of manure seems to have found its way generally up the Thames, except woollen rags, which are sold in considerable quantities at Reading, Henley, and Marlow. Coal ashes have scarcely ever been brought up higher than Maidenhead or Marlow, peat ashes, which will be particularly mentioned hereafter, being more generally sold as a manure at the wharfs between Maidenhead and Wallingford, a distance of nearly forty miles. Exclusive, however, of the produce and manufactures of the county more immediately adjoining, by its communication with other navigations, the division of the Thames, which we have been describing, conveys the produce and merchandize of very distant counties, to and from London. The Thames and Severn canal connects it with the river Severn, and consequently with all ports, upwards as well as downwards, on that river:—with Wales, and circuitously

cuitously with Bristol. The Oxford canal unites it with the various navigations of the North, with Birmingham, Manchester, and Liverpool. Its other connections,—the Wilts and Berks canal in part, and the river Kennet navigation entirely, within the limits of the county, will be particularly described hereafter.

The leading advantages attendant on the navigation of this noble river, for the whole of the district under consideration, and which render an attention to its maintenance and improvement a public duty, are, *first*, its plentiful and equable supply of water, which enables it to support an almost infinite quantity of tonnage; the water consumed in the passage of the largest barge through one of the pond locks, bearing so very inconsiderable a proportion to the whole volume of its stream.

The value of this supply is easily estimated by the proprietors of many much boasted canals, who pay heavily for every lock full of water forced up by steam-engines, or diverted from mills. This equability of supply prevents any material interruption from floods, which do not on the average hinder the navigation for more than twenty days in the year; and as, from the constant stream, it is less liable to be frozen than the stagnant waters of a canal, its navigation is not subject to more interruption from floods, than is experienced from frosts on canals in general.

Secondly, a material advantage arises from the low rate of tonnage paid at the pond-locks, which, although it does not amount to more than 3*s*. 8*d*. per ton per mile, is still capable of reduction. For as the interest of the money borrowed on the credit of the tolls is limited to five per cent. every increase of trade tending to a diminution of the rate of tonnage, will render it

eventually a free navigation, or enable the commissioners (as they have in many instances already done) to undertake such improvements as will reduce the expence of navigating.

The *third* table in the Appendix will shew that the probabilities of this diminution, or of similar improvements, are not very remote or speculative.

Yet, after all, it must be confessed, that less has been done towards improving this valuable navigation, than its allowed importance demands. Had the judicious plans of Mr. Loveden, one of the most active and zealous commissioners of the Thames, been adopted in shortening the navigation, by making a cut from Hart's Ferry, in the sixth district, to Abingdon wharf, or even from Brookin's weir to Folly bridge, near Oxford,* had inferior obstructions and impediments been removed within the remaining districts, and particularly within the jurisdiction of the city of London; had there been

* These are not the only improvements suggested by Mr. Loveden. In the year 1784, a survey was taken, and a plan made, at his private expence, of a canal from the line of the Thames and Severn canal, in the parish of Kempsford, near Lechlade, to the river Thames at Wallingford. It passed to the south of Highworth, Wilts, and within a mile of that town, thence by Coleshill and Becket, to Longcot common, from whence it pursued the line nearly of the present Wilts and Berks canal, as far as the neighbourhood of Wantage; and from the summit level there, a branch was intended to be made to Abingdon, while the principal navigation was to pass through West Hendred, Steventon, Milton, Didcot, Hagbourn, South Moreton, and Cholsey-field, to the Thames at Wallingford. By this the distance between Wallingford and the Severn would have been reduced to 73 miles. It was to have been on a scale to admit the Thames barges, and was found very practicable by that able engineer the late Mr. Robert Whitworth. The whole Vale of White Horse would have been benefitted by its adoption, and the proprietors would probably have received an ample recompense for the risk.

any

any unity of design among the Thames commissioners, who, acting for separate districts, are too often unacquainted with the interests of the whole, the *junction* of the *Severn* and *Isis*, which once promised so much, would not so completely have failed;* nor would the same necessity have existed for projecting other navigations, whose public advantages remain to be tried, but whose returns, to original subscribers, must unavoidably be slow.

In fact, it is the opinion of some very impartial gentlemen, that nothing but rendering the Thames a proprietory navigation, can obviate all the inconveniences resulting from want of concert, and local impediments. But on this subject I speak with diffidence, and under "Means of Improvement," &c. shall introduce the ideas of an able judge, Frederick Page, Esq. of Newbury, to whom I am indebted for the facts and arguments relative to the navigations of Berks in general, well as for other instances of friendly attention, to promote the objec of my enquiries.

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* The following extract from the last report of the Committee of the Junction of the Severn and Isis Company, will prove the truth of this position.

"The amount of money borrowed by the Company, for which mortgages have been regularly given, is 104,425*l.* in addition to which 12,700*l.* has been borrowed on bonds, making in the whole 117,125*l.* the interest of this sum, at 5 per cent. would require an annual produce of 5,856*l.* 5*s.* a sum greater than the Company's revenues by 3,226*l.* 7*s.* 8*d.* which, forming an accumulation of debt, renders the situation of the concern more and more hopeless. Besides the above debt of 117,125*l.* the arrears of interest amouted to 70,914*l.* and for the year ending October 5, 1806, the clear income was only 2,629*l.* 17*s.* 5*d.* The inference is obvious!

THE RIVER KENNET.

The navigation of the river Kennet, from its junction with the river Thames to the High bridge at Reading, a distance of about one mile, was, by a clause in statute 24 Geo. II. cap. 8, placed under the jurisdiction of the commissioners of the river Thames; and the old lock, called Blake's, and the new pond-lock, lately erected, adjoining to it, are subject to the same regulations as those on the river Thames; but from the High bridge at Reading to Newbury, the river Kennet was made navigable by certain undertakers, under powers given them by statute 1. Geo. I. c. 24-7. Geo. I. c. 28. and 3. Geo. II c. 25.

The original undertakers of this navigation proceeded upon the same principal as that on which the pond-locks have since been erected on the Thames, of conducting them near to the then existing mill-dams; but as this plan would not have made an efficient navigation, and by following the circuitous course of the river, very much extended the distance between the two towns at its extremities, a regular water level was followed, and pond-locks erected on cuts or canals, which reduced the distance between the mill-dams, and where the mill-dams were insufficient to pen a proper head of water for navigation, new pens, by means of open weirs, were substituted. This plan was suggested and executed by a Mr. John Hore, at that time resident near Newbury, whose name deserves to be rescued from oblivion, as having, exclusive of many useful works executed on the river Kennet, been the engineer first employed on the river Avon, between Bath and Bristol, and having adopted and executed a navigation, of which, I believe, there then existed no model in England.

In

In consequence of this improvement, there were made new cuts, or canals, for the length of eleven miles and a half, and that part of the channel of the old river which is navigated being seven miles, the whole distance from Newbury to Reading, by water, is only eighteen miles and a half, being only one mile and a half further than by the turnpike road between those towns.

The fall from Newbury to Reading is 134 feet nearly, averaging at about 8 feet per mile. The locks are in number twenty, the length of each lock 122 feet, the width 19 feet, capable of admitting barges 109 feet long, and 17 feet wide, drawing 3 feet 6 inches water; and at that depth carrying about 110 tons. The width of the canals, or cuts, is 54 feet, water surface, the depth about four feet and a half, and the mean width of the navigable part of the river is about 70 feet. The locks are constructed principally of timber, the chambers being piled about 4 feet above the water level, and then sloped off, in an angle of about 45 degrees, and turned. This plan has been found by experience to be the cheapest as well as the most convenient; for as the consumption of the water is not material, the barge is less liable to wash, than where the chambers are closer.

The bridges are also of timber, and upon the principle of the *Ponts-toumans* of the French engineers; but as I have never seen on any other canal, nor in any publication, bridges of the same construction as those on the Kennet, plates explaining them would be useful There are but three arched bridges over the navigation; for as the country through which the river flows is very flat, and the barges are generally towed from the mast-head, bridges of any other construction would have been equally inconvenient to the roads crossing the

the river, and to the navigation. The tonnage granted by parliament is four shillings for every ton of 20 cwt. on all goods carried the whole distance from Reading to Newbury, or *vice versa*, and after the same proportion for a less distance. This rate is something more than two-pence half-penny per ton per mile. But the whole tonnage is in many instances not taken; and on articles of very general consumption, not even half of it.

The staple articles conveyed on the Kennet are similar to those on the Thames, before enumerated. The wharfs on it are at Aldermaston, about ten miles above Reading, and at Newbury. The former being contiguous to the northern well wooded parts of Hampshire, is the place of export of very considerable quantities of woodland produce, such as timber, hewed and round, scantlings, hoops, brooms, &c. The wharf at Newbury, which has for many years been the depôt of a very extensive inland carrying trade to all parts of the west of England, has a bason, or wet-dock, where ten of the largest barges may load or unload with the greatest facility.

The barge-masters resident here have warehouses, or regular establishments, and connections in most of the principal towns in the West; and undertake the conveyance of goods by land and water the whole distance between the western counties and London. But as the water communications extend further westward, it seems a matter of doubt, whether goods will be deposited and shifted in future at Newbury into the vessels adapted to the new canals, now making; or whether the vessels navigating those canals will pursue their voyage with their first ladings.

THE KENNET AND AVON CANAL.

At Newbury commences the Kennet and Avon canal, executing under the powers of several successive acts of parliament; and that part of it within the limits of this county has been navigable ever since the year 1798. As it is probable that this canal, when completed, for the whole of its extent, will have very material and beneficial effects on the trade and agriculture of this county, it may not be foreign to the subject to give some further particulars concerning it.

The advantages which were considered likely to be derived from it, at its first projection, were the supply of the country from Bath eastward, certainly for a considerable way down the Thames, and not improbably as far as London, with household and smiths' coal, from the Gloucestershire and Somersetshire mines; and with stone coal for malsters' use, from South Wales.

The extension of the consumption of free-stone for building, from the quarries near Bath,* of a quality

* In Kirwan's Mineralogy, (second edition, 1794, p. 83.) Bath and Portland stone are both classed under the same head of "indurated compact limestone, of an earthy fracture, the specific gravity of the former being 2.494, that of the latter 2.461.

Smeaton (Eddystone Lighthouse, p. 111.) says, "that the most perfect composition of water-mortar is a proper mixture of blue lyas, lime, and puzzolana," Ibid. p. 115. At Bath, they pave the streets with a species of lyas; and to render the pavement more durable by keeping out the wet, they joint the paving with mortar of the same kind of stone. The Bath freestone is of the pure calcareous kind; and it is remarked, that when it is walled with this kind of mortar, which is frequently, if not generally, used for this purpose, the joints are more permanent, and resist the water even better than the stone itself; and it is this circumstance which gives that peculiar firmness to be observed in the light and thin walls of the buildings of that splendid city."

equal

equal to Portland, and in many respects, such as retaining its colour, facility of working, &c. much superior; of limestone of the first quality for building and agricultural uses, from the neighbourhood of Bath and Bristol; of paving stone, of a most durable nature, and stone for pitching streets, from the Marlborough downs; and of gypsum, which is found within three miles of Bristol.

The opening to a much greater extent of a market for the grain and timber of Berkshire, Hampshire, and Wiltshire, to Bath, Bristol, and to the rapidly increasing population of the manufacturing parts of South Wales.

The conveyance of the iron and copper of South Wales, and the slates of North Wales to London, and of every species of consumable goods, or for export, between London and Bristol, and the towns and country intermediate and adjacent to the line of the canal. These advantages combined, are certainly of great magnitude, and justly entitle the undertaking to the appellation of a national concern.

The width of the canal is 40 feet, water surface, 24 feet at bottom, and 5 feet deep; but on the summit level, which is intended also for a reservoir, it is 44 feet wide, and 6 feet deep.

The locks are 80 feet in length, capable of admitting barges 70 feet long, 13 feet 6 inches wide, and carrying 60 tons.

From Newbury to Burbage, the canal rises 208 feet, and descends from thence into the river Avon, at Bath, 402 feet; the total distance from Newbury to Bath being 57 miles.

From Newbury to Hungerford, the canal is carried along the valley of the Kennet; near Hungerford it

enters

enters the chalk hills, and continues its course between them till it reaches the sandy district, where the springs of different rivers rise, flowing westerly, southerly, and easterly; and which character the country retains, degenerating more into a sand-stone, until it reaches Devizes.

At the highest part, near Burbage, the canal is carried through a deep valley of rich sandy loam, the chalk hills on each side being at least 300 feet above its level.

From Devizes, through the vale of Melksham to Bradford, the stratum is loam, &c. But from thence to Bath, it runs through the calcareous free-stone rocks, which have been quarried for the masonry of the locks and bridges; and some of which, with the aqueducts over the river Avon, afford elegant specimens of this material.

At Bath, the canal joins the river Avon, which is navigable to Bristol; and about eight miles on the eastern side of Bath, it communicates with the canal from the Somersetshire collieries: at about twelve miles, the Dorset and Somerset canal unites with it; and at about fifteen miles in the same direction, the Wilts and Berks canal branches from it in a north-east direction.

When completed, which it is most probable it will be within two or three years, it will have cost 730,000*l.* and upwards.

The Kennet, from the part where it is first navigable, and where indeed it first becomes of much importance, to its confluence with the Thames, being entirely within the limits of the county, I trust the following particulars relating to it will not be out of place in the Agricultural Survey, as they seem to have an intimate connexion with the statistics of the county.

Commencing

Commencing at Hungerford, the Kennet supplies with its stream, between that place and Reading, eighteen corn, four paper, three clothing and fulling mills, and one for drawing iron wire; and there are many other places on the line of the Kennet and Avon, and river Kennet navigations, where mills might be erected. If we estimate these mills one with another, with their machinery, as worth only 4000*l.* each, the original cost of making the river Kennet navigable (84,000*l.*), and the recent expenditure on the Kennet and Avon canal (100,000*l.*), we find a capital of 276,000*l.* permanently vested in it, or on its banks, productive, or in rapid progress to become so, and facilitating and extending, by various modes, the commerce, manufactures, and agriculture of the kingdom at large. Natural causes, principally owing to the width of the valley through which the Kennet flows, and the precipitancy of its descent, added to the navigable channel being kept open, and the attention in general paid to the removal of obstructions in its course, preclude the possibility of a long duration of floods, and facilitate the drainage and irrigation of the lands adjoining.

By the necessary frequency of the dams for the navigation, the falls on the river have been ascertained; and many valuable water meadows made, from this circumstance alone. This latter cause also retains the water, and distributes it regularly, so as to give the mills and navigation of the river a decided and almost proverbial advantage. It is a circumstance peculiarly favorable to the adoption of river navigations, if properly managed, that so far from clashing with the interest of the land or mill owners, they coincide with and assist them. There is scarcely a mill on the river

Kennet

Kennet of which the dam, or pen, has not been raised very considerably since the navigation, and by its assistance; and as the volume of water in the channel of the river has increased by the improved drainage, not only the power of the water, but the quantity of that power is augmented.

One or two instances will suffice to shew how much the drainage is improved. To complete the navigation of the Kennet and Avon canal, it was necessary to remove a considerable shoal, which had been accumulating for years, below the bridge at Newbury; since that, for a period of ten years, the floods, which before were frequent, have never been the occasion of the slightest inconvenience to the town.

It is not also perhaps generally known, that previous to the acts being obtained for making the river Kennet navigable, on the scite of the lowest pond-lock near Reading, there was a weir, or waste-lock, called the county-lock, which was purchased of the commissioners of sewers, by the undertakers of the navigation, and rebuilt; at which time the sill was laid two feet deeper than before, and a much more considerable discharge obtained for the flood water. By these means, the extensive tract of marshy land immediately west of Reading, is not only sooner relieved from the effect of sudden floods, but the owners are exonerated from the heavy burdens to which they were liable under the commissioners of sewers, which frequently amounted to 7*s.* 6*d.* per acre annually, although no effectual drainage was ever made under their superintendence. The neglect of good husbandry in suffering that part of the river, not navigated by the barges, to be obstructed by sand-banks, decayed timber,

ber, &c. is the principal, if not the sole cause, of the still unimproved state of that district of marsh land.

Canals which are generally carried along the sides of hills, to favor the adoption of long levels, diverge from the natural course of the water on which mills are necessarily constructed. By this means, that natural connexion, especially in an agricultural district, between the places where the grain is manufactured, and the means of its exportation, is dissolved or weakened. But when the navigation and mills are in the vicinity of each other, as is particularly the case in the subject under consideration, the benefit is mutual; both because not only the manufactured grain is exported to its distant market, but the raw grain is conveyed from the country market to the mill. This latter branch of the trade on the river Kennet amounts to near 2000 tons annually, which, if the navigation did not pass directly from the markets to the mills, would be carried cheaper by land.

This applies also to a very large portion of the landed property, adjoining the river. By the facility given to the drainage, peat, the peculiar produce of the Kennet valley, is obtained with much greater ease than it could otherwise be, and by the convenience of the navigation, its exportation as a manure is easily effected. For nearly the whole length of the valley, the river Kennet flows through land abounding in peat, or from whence it has been formerly extracted.

As an hypothesis respecting the formation of the peat is not here requisite, I beg only to enter my protest against the popular opinion, that it is in the least owing to the general deluge, as I consider it of very recent alluvial deposition and formation. What is more immediately

mediately connected with the present subject, is to observe, that there have been annually conveyed down the river Kennet at least 8000 tons of peat ashes for sale at the wharfs on the Thames, upwards as far as Wallingford, and downwards to Marlow, and that the consumption of them, and conveyance up the Kennet and Avon canal, westerly, is rapidly increasing.

WILTS AND BERKS CANAL.

This navigation, springing from the Kennet and Avon canal at Simington, about fifteen miles east from Bath, extends from S. W. to N. E. across the counties from which it takes its name, and is to terminate at Abingdon. The original design of this canal was the conveyance of coals into the vale of Wilts and Berks, a country where fuel of all kinds is extremely dear, and to freight back with corn for the Bath and Bristol markets. The length of this canal is 51¼ miles; from Abingdon to the summit level is 165 feet; the length of that level, from Marston to Chaddington common, is 8 miles; the fall from thence to Simington is 199 feet; the depth of this canal is 4 feet 6 inches; width at bottom 13 feet 6 inches; water surface 27 feet. The barges are 70 feet in length, and 7 in breadth; burthen about 25 tons.* The canal is carried through a homo-

* Had this canal been on a scale adapted for the reception of the Thames barges, it probably would have been a very productive concern. In order to obviate some of the disadvantages to which its original plan is liable, and to render it more productive, a cut should be made from Longcot common to Kempsford, near Lechlade, which would be little more than a distance of ten miles. The junction of the Thames and Severn would thus be completed; and the practicability of the undertaking is demonstrated by the survey which Mr. Whitworth took in 1784, on account of E. L. Loveden, Esq.

geneous country, being part of that long fertile vale interposed between the chalk hills and the limestone range, and extending in a N. E. and S. W. direction from the German ocean to the English channel.

The communication made by means of this canal, connecting the north-western parts of Berkshire with Bristol and the West of England, as the Kennet and Avon canal does the south and western parts of the county, is in many respects analogous to that made by the latter canal; and many branches of trade on each of the lines will be similar. But it is probable, that the principal points of difference will be, that the supply of coal from the Somersetshire pits will be limited by that from the Staffordshire collieries down the Oxford canal, through Abingdon; and as the distance will be twenty miles more by the Wilts and Berks canal, than by the Kennet and Avon; and as from the danger of navigating the Thames with the small boats of the canal, there will be a necessity of shifting the goods at Abingdon, there does not appear any probability of a rivalship between the two lines of canal, with respect to the general conveyance of goods between Bath, Bristol, and London.

On the other hand, it has this advantage, that by its more direct communication with, and by having boats of the same size as the Oxford canal, which connects with the canals of the North of England, it has an opportunity of conveying the manufactures and produce of the northern to the southern parts of the island, and *vice versa*, more directly and more certainly than they are at present carried on the river Severn.

And this is perhaps the proper place to observe, that a canal from Pewsey on the line of the Kennet and Avon canal, 12 miles east of Devizes, by the side of the river

river Avon, which flows directly from that place to Salisbury, about 21 miles, would very much facilitate this interchange of commodities; and, exclusive of local advantages, form the only inland communication between the North and South of England, and connect the ports of London, Bristol, and Southampton.

SECT. III. IV. V. VI.—TOWNS, FAIRS, WEEKLY MARKETS, COMMERCE, AND MANUFACTURES.

The intimate connexion which subsists between the subjects at the head of this division, has induced me to throw them together, not only for the sake of perspicuity, but that I might be the better able to do justice to the whole. It is only in towns, that fairs of any magnitude, or weekly markets, are established; or that commerce and manufactures are carried on to any extent. Exceptions, however, will be noticed, after I have gone through the towns in alphabetical order.

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1. ABINGDON.

This is an ancient and respectable town, and appears to have juster claims than Reading to be considered as the county town, though inferior in magnitude and elegance. It stands at the conflux of the Ock and the Thames, about 56 miles from London, on the Cirencester road, and contains two parishes, 889 houses, and a population of 4356 souls. It is governed by a mayor, two bailiffs, and nine aldermen, and returns one member to the imperial parliament, who is elected by the inhabitants at large, not receiving alms. The Town-hall is an elegant fabric. Many of the houses

are old and stone built. The best modern houses are of brick, except that belonging to George Knapp, Esq. the present representative, which is handsomely built of stone. Paved by act of parliament in 1792, and partially lighted, at the charge of individuals.

Fairs. First Monday in Lent; for horses, cattle, and sheep. A number of stalls.

May 6; St. Mark, O. S. for horses, cows, sheep, and bulls, hence called the Bull fair. A few stalls. Some cheese.

June 20; for horses, cattle, but chiefly for pleasure. It is distinguished by the name of Ock-street fair.

August 5; St. James, O. S. for lambs and wool. Regularly increasing.

September 19; for horses, sheep, fat, and store cattle, and cheese.

Monday before Old Michaelmas; for hiring servants, usually called a statute fair. Well attended.

December 11; for horses, cattle, and sheep. Much business is done at the Abingdon fairs in general.

Weekly markets. Monday; corn sold by sample. Sheep, pigs, cattle, butter, poultry, &c. Well attended. Much grain sold.

Friday; for the delivery of corn sold on Monday, and for butter. Both market days toll free for corn only; collected on intermediate days, on corn, as well as other articles. Tolls taken in money and in kind. Leased by the corporation.

Commerce. Standing on the banks of the Thames, there is a considerable trade with London. Much grocery, hemp, and other articles imported. The malting trade, which was once extremely flourishing,

ing, is now considerably decreased, and is divided between London and the northern counties. The Oxford canal chiefly, at present, supplies the vicinity with coals; but the Wilts and Berks, which is to join the Thames on the east of the town, will probably, in time, gain the advantage in this respect.

The carriage by water amounts to about half the price of land carriage. A barge with full water will reach London in five days, and return in ten. Many obstacles, however, still exist in the river navigation.

Manufactures. The sacking manufacture is carried on to a considerable extent; but is much diminished, since the government contract ceased. A different kind of cloth is now used for hammocks, &c. One manufacturer, Mr. Thomas Westbrook, has formerly produced about 300 pieces per week, of 24 yards each; now only 700 pieces are made in the same time, in the whole town. About 3000 men, women, and children, are still employed in this manufacture in the town and neighbourhood. About 1800 in Abingdon only.

A contract with government still exists for biscuit bagging, which employs about 150 men, women, and children. A good workman in these manufactures will earn about 18 or 20*s.* a week, women 5*s.* children from 1*s.* 6*d.* to 2*s.* 6*d.*

Some little sail-cloth is likewise manufactured here; and considerable quantities of hop-pocketing.

Many sacks are made up, and sold to the millers and farmers round the country.

A floor-cloth manufactory, on a small scale,

fabricates pieces from seven yards, to a yard and a half wide.

A new manufacture of rush and twine matting has lately been established, of which considerable quantities are sold. A piece of 24 yards, and three-quarters wide, may be purchased for a guinea. It is well adapted for common halls, staircases, and passages.

Mr. Child has a large brewery for beer and porter. There are some smaller establishments for beer only.

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2. FARINGDON,

The most westerly market town of the Vale, chiefly built in the old fashioned style, but with some neat modern edifices, stands on the Cirencester road, at the distance of 71 miles from London, and three from the banks of the Thames, which forms the boundary of the parish. Part of the town occupies the side of an eminence, from which the views are rich and extensive; but the more central situations are confined in their prospects. It contains 309 houses, and 1691 inhabitants. The inns and public houses amount to 14; but about 40 years ago, it appears they were at least double the number. It is governed by a bailiff, and other inferior officers, and has several rich capitalists, who deal in bacon and cheese.

Fairs. February 13, Old Candlemas-day; for horses and cows.

Whit Tuesday; for horses, &c. but chiefly a pleasure fair.

October 18; a large statute fair, for hiring servants. Many stalls.

October

October 29; for horses and cattle. To this fair many fat hogs used formerly to be brought; but they are now purchased by the dealers, at the houses of the dairymen.

Markets. The only weekly market is on Tuesday. Corn sold by sample. Much business generally done. The custom is to pay on delivery, or next market day. The lord of the manor levies tolls at fairs and markets: from 4*d.* to 6*d.* per load. A horse bought or sold pays 4*d.* Tolls moderately exacted.

Provisions plentiful and good of all kinds. Beef about 7½*d.* per pound; mutton 8*d.* Little variation in the price the year round. Poultry, pigs, butter, &c. reasonable.

Commerce. Faringdon, standing near the centre of the dairying part of the county, is one of the principal marts for hogs and bacon, in this part of the kingdom. No fewer than 4000 hogs, from 10 to 20 score each, and upwards, though the average is about 12 score, are killed and cured in this place annually; chiefly by two families, who have engrossed the greatest part of the business. The bacon, which is deservedly in high estimation, is disposed of in London, and along the line of country, between this place and the metropolis. From the uncertainty attending the navigation of the Thames, it is obliged to be sent principally by waggons.*

* The navigation of the Thames is so much neglected, and so tedious, that perishable articles, or such as are quickly wanted, cannot be trusted to it. The Thames and Severn canal has but little trade. The Wilts and Berks, which runs through the Vale of White Horse, is likely to be of more utility to the public than to the proprietors.—*Mr. Mattingley.*

Commerce.

Some considerable dealers in cheese are likewise established in this place, who trade with London, and other parts.

Manufactures. None, except the spinning of worsted in the house of industry.

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3. HUNGERFORD,

Stands on the banks of the Kennet, at the distance of 64 miles from London, and is the great thoroughfare between the metropolis and Bath, which renders it a bustling place. It is situated in an open vale, with hills of moderate elevation in the distance, and may be considered as rather a pleasant town. It contains 398 houses, and 1987 inhabitants, exclusive of that part of the parish which lies in Wilts. The Kennet, which is navigable five miles higher up, has here a divided stream. It is an ancient place, which gives a baronial title in tail to the noble family of Hastings, of which the present Earl of Moira is the representative. A constable, annually chosen, is principal magistrate, and lord of the manor.

Fairs. The last Wednesday in April; for cows, pigs, &c. The largest held here.

August 10. Very little done.

The last Wednesday in September. Statute fair.

The first Wednesday in October. Ditto.

On the spot, I was informed that the statute fairs were held the Wednesday before and the Wednesday after Michaelmas, N. S. but this seems less precise than the public account.

Markets. For time immemorial, a market has been established here on Wednesdays. It is, however, but

but small. Corn is sold by sample. Tolls are paid.

Commerce. Except a little malting, and the ordinary business of a country town on a navigable stream, there is little trade carried on. The chief dependence is on agriculture. Only corn-mills in the vicinity.

Manufactures. The women are employed in spinning serge; but it is not manufactured in the town. A tan-yard, on a large scale.

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4. ILSLEY.

A small town, agreeably situated in an open vale, near the eastern extremity of the Berkshire downs, which surround it on all sides, and contains 114 houses, and 512 inhabitants. It stands on the road from Oxford to Newbury and Southampton, about 53 miles from London. A good carriage road between this place and Streatley, across the downs, would be a public accommodation, and would be attended with small expence.

Fairs. March 26; for sheep, &c.

The Berkshire Agricultural Society, with a due regard to the situation of this place, in the midst of extensive downs, and its celebrity as a sheep market, once thought of establishing a wool fair at this place in July; but Newbury and Wantage have ultimately been fixed on.

August 26; usually called lamb fair, the largest in the year. At this fair, upwards of 30,000 sheep, of various breeds and ages, and many from a great

great distance, have been exposed to sale. Stationary pens for sheep line the streets, at all times of the year.

An All Hallows tide fair was mentioned to me; but I do not find it noticed in the almanacks.

Markets. The market-day is on Wednesday. Little business done, except in sheep. The grand sheep markets begin at Easter, and continue every fortnight till shearing time. Twenty thousand sheep have been collected at one of these markets, which are six or seven annually: the average number during their continuance may be taken at 15,000; as I learned from the principal proprietors of the pens.

Commerce and Manufactures. None deserving mention.

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5. LAMBOURN.

An ancient town on the western side of the downs, distant about 64 miles from London. It stands on no direct road; yet had once the addition of *Cheping*, and has now a parish, the largest in the county, and co-extensive with the hundred of the same name. The town itself contains 200 ordinary houses, and 964 inhabitants. The parish church is a handsome cruciform pile.

Fairs. Old May-day; for cows and sheep.

October 4; for hiring servants, and the sale of sheep.

December 4; for sheep, cows, horses, colts, foals, &c. Much business done at this fair.

Markets. Friday is the weekly market-day. Much declined.

declined. In spring, grass seeds and grain sold in some quantities: the remainder of the year little done. Corn sold by sample.

Commerce and Manufactures. None. Sheep and corn the chief dependence.

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6. MAIDENHEAD.

A town nearly a mile long, and bounded on the eastern extremity by the Thames, over which a modern stone bridge is erected. It contains about 180 houses, and 1109 inhabitants. The buildings are almost wholly of brick, and have a neat, and some of them an elegant appearance. It is a corporation, and is governed by a mayor, bridgemasters, and burgesses. Being on the direct road to Bath, as well as to Oxford, it is a great thoroughfare to London, from which it is distant 26 miles.

Fairs. Wednesday in Whitsun week. Little business done.

September 29; all sorts of cattle, except sheep.

November 30; ditto. Largest held here.

Markets. The weekly market is on Wednesday, which is well attended, and considerable quantities of corn sold by sample. No tolls demanded. Beef and mutton 8*d.* veal 9*d.* butter 16*d.* on an average; Eggs and poultry rather high, from the vicinity to London.

Commerce. Malting is carried on to some extent, chiefly for the London market.

Manufactures. A sacking manufacture; employs a few hands. The cotton mills at Taplow, on the other side of the Thames, give employment to many boys and girls belonging to the town.

7. NEW-

7. NEWBURY.

A genteel, rich, and populous, brick-built town, pleasantly situated on the Kennet, which divides it by an artificial channel.—The natural channel separated this parish from Speen. It stands on a peaty soil, but is perfectly dry and healthy. The ground plan represents a Roman Y.

Newbury contains 965 houses, and a population of 4275 persons. It is incorporated, and governed by a mayor, high steward, recorder, 6 aldermen, and 24 capital burgesses. Till about the time of Edward IV. it sent two members to parliament. The great Bath road passes through the upper part of the town, which is distant 56 miles from London. It was paved and lighted a few years ago, by voluntary subscription. About 1400*l.* was raised for this purpose in one morning. No tax was imposed on the inhabitants, nor was an act of parliament required. This sufficiently attests the public spirit of the place!

Fairs. Holy Thursday; for cattle.

July 5, Old Midsummer-day; ditto.*

September 4; for cattle and cheese.

November 8; for ditto.

A customary fair likewise is held the first Thursday after the 10th of October, for hiring servants, and is very numerously attended.

Markets. The weekly market is on Thursday, and is one of the largest for grain, in this part of the kingdom. The quality, as it arises from various soils within the distance of 20 miles in some directions, is adapted for every purpose that can be required. One sack out of a parcel is pitched; the rest is delivered into granaries, erected near the wharf.

* The Agricultural Society of Berks recommend, and engage to support, a wool fair here, on this day.

The corn-porters, a body of men who are much trusted, though under no particular responsibility, transact the greatest part of the business. They probably owe their origin and support, to the indolence and opulence of the farmers.

Though a pitched market, small quantities of corn are not easily procured. The market commences about eleven o'clock, and is over by one. After dinner, the sales are paid for; the waggons return with the sacks, and the farmer with his money.

Tolls are taken at the rate of a quart in a quarter, or eight bushels.* They are now let for 365*l.* per ann. and probably produce double that sum in gross to the renter; which may give some idea of the quantity of grain sold here.

Poultry, butter, and other rural commodities, are plentiful, and may be generally purchased at a moderate price. Beef and mutton about 7*d.* Many country butchers, particularly from Wantage, attend the market. Competition is always a benefit to the public!

Commerce. As the navigation of the Kennet from Newbury to Reading, a distance of 18½ miles, is in an excellent state, from the continued exertions and attention of its proprietor, Frederick Page, Esq. of this place, and is capable of conveying barges of 110 tons burden, which proceed from Reading by the Thames to London, there is a considerable trade carried on by water, both backwards and forwards.† The wharf, which is provided with a

* A few farms in the neighbourhood, about ten in number, are toll free.

† For particulars see the preceding section.

noble

noble basin, and has every necessary appendage on its banks for the stowage of goods, when filled with barges, loading and unloading, gives a maritime and commercial appearance to the place, and bespeaks the extent of its trade. When the Kennet and Avon canal is completed, and the communication between Bristol and London established, this will be a central spot. The dwelling house of the proprietor overlooks the whole establishment, and is most conveniently situated for pleasure as well as business.

There are two large corn-mills at Newbury, and considerable quantities of malt are made, which, as well as meal, is sent to London.

Much bacon is also killed and cured here; but there is no principal dealer in this article. Any person who can command from 20*l.* to 50*l.* sets up as a pig-butcher; and sometimes increases his humble means to a decent capital.

There are also two large and one smaller brewing establishments, which supply the town and neighbourhood.

Manufactures. Newbury was formerly famous for its woollen manufactures; but these are now nearly lost, and hence a numerous poor.

In the town and its vicinity, however, some kerseys, cottons, callicoes, linen, and damask, are now manufactured. Blankets are likewise made by some persons from Witney, in Oxfordshire; and it does not appear that they produce an inferior article.

A paper-mill, on a large scale, does much business in its line. The paper is excellent, and applicable to almost every purpose of printing or writing.

It should likewise be observed, that many barges are built here, both better and cheaper than elsewhere. They lade down with timber, which grows in considerable quantities on the banks of the Kennet, and which is sold at London, or other places, according to their destination, and thus, at first, pay a part of their expences in freight.

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8. OAKINGHAM,

Pleasantly situated within the precincts of the Forest, on the little brook, called the Emme. The houses are generally built of brick, and some of them make a handsome appearance, particularly that belonging to J. Roberts, Esq. lord of one of the manors in the parish.

Oakingham contains 298 houses, and 1380 inhabitants. It is a corporation, and is governed by an alderman, burgesses, recorder, and high steward, making twelve in all. The church stand in Wilts.

Fairs. Thursday before Lent.

St. Barnabas-day, June 11.

First Tuesday after New Michaelmas-day; for hiring servants,

All Souls, November 2.

The fairs belonging to this town are most unaccountably neglected, or at least are not attended as they deserve to be. Standing in a neighbourhood where many sheep and other cattle are bred, possessing a fine spacious market-place, and surrounded by enclosures, where sellers might conveniently and cheaply be accommodated, during the continuance of fairs, it is really surprising that Oakingham has not become a mart for Forest stock,

stock, as well as cattle of every kind, from other parts of the kingdom. I wish to call the attention of the public to this subject, which seems to be connected with its interest; particularly as I am assured, the magistrates would not only grant every facility in their power to dealers and others, but would wholly exempt, or be very moderate in collecting tolls for cattle.

Markets. Market day is on Tuesday. It is a sample market; and, exclusive of other common articles of sale, is particularly famous for fatted fowls, by which many persons in the town and neighbourhood gain a liveing. They are sold to the London dealers; and the sum of 150*l.* has been returned in one market day by this traffic. Twenty dozen of these fowls were purchased for one gala at Windsor, at the rate of half-a-guinea a couple. At some seasons of the year, 15*s.* is paid for a couple. They constitute the principal commerce of the place.

"They are put up in a dark place, and crammed with a paste made of barley-meal, mutton suet, and some treacle, or coarse sugar, mixed with milk, and are found to be completely ripe in a fortnight. If kept longer, the fever that is induced by this continued state of repletion, renders them red and unsaleable, and frequently kills them. Geese are likewise bred in this neighbourhood in great numbers, and are sold about Midsummer, to itinerant dealers, from 2*s.* to 2*s.* 3*d.* each."

S. Nicholls, Esq.

Manufactures. Three silk manufacturers have establishments here. One is for spinning, and two for weaving. Hatbands, ribbands, watch-strings, shoe-

shoe-strings, sarsenets, figured gauzes for ladies' dresses, &c. are manufactured here. The spinning and twisting mill is worked by one horse, which turns a large horizontal wheel, that communicates with others, and sets in motion 432 spindles, in a very spacious apartment over the machinery. These manufactures are pretty flourishing and increasing, and employ nearly 100 persons, of all ages. Men can earn 30*s*. a week; but chiefly women and children are engaged; the former will earn from 8*s*. to 10*s*. a week, the latter 5*s*. The superintendents send the produce weekly to London.

A parchment manufacture likewise belongs to the place. The brewery of James Webb, Esq. is pretty extensive; and produces a wholesome and pleasant beverage, not inferior to any in the county.

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9. READING,

Distant 39 miles from London, and delightfully situated on a gradual ascent from the Thames, and washed by the Kennet, which flows nearly through its centre in several streams, and falls into the prince of British rivers, about a furlong below the town. The houses are chiefly of brick, well built, and commodious; and the streets are spacious and handsomely paved. An air of gentility is thrown over the place; and there is an elegant sociability in the manners of the inhabitants, which is irresistibly attractive to strangers. Hence villas are constantly rising in its vicinity; nor is this to be wondered at, as there is not a country town in the kingdom that

that unites so many charms and advantages to persons of independent fortune, and cultivated minds.

Reading contains three parishes, 1787 houses, and a population of 9742 souls, which is constantly increasing. It is governed by a mayor, aldermen, &c. and returns two members to parliament, who are chosen by the inhabitants paying scot and lot, amounting to about 600. The spring assizes are held here; the Epiphany, and sometimes the Michaelmas seasons. The grammar school is in high reputation, under the direction of Dr. Valpy, and is an ornament and advantage to the town; which, in every respect, is the first in Berkshire, though it divides the honours of the county with Abingdon.

Fairs. February 2; horses, and cow cattle, chiefly.

St. James's day, July 25; ditto. Many horses bought and sold. Fair increasing.

September 21; cattle of all kinds. A very large cheese fair, brought from Wilts, Gloucester, and Berks; held in the Forbury; some thousands of tons sold.

Markets. The principal market-day on Saturdays. Corn pitched. Not less than 100 loads of wheat sold weekly, and other grain in proportion. Begins at nine o'clock, and is finished in about an hour and a half, when the farmers return with their money and sacks. Toll a quart per quarter. The Winchester bushel used here.

The wheat sold at Reading market is peculiarly excellent, and the flour is much esteemed.

Meat, poultry, butter, &c. abundantly supplied. Beef and mutton between 7*d.* and 8*d.* per pound, on an average. Provisions dearer in general than at Newbury.

The

The market on Wednesday is chiefly for butcher's meat, and fruit in summer.

Commerce. Situated at the conflux of the Thames and the Kennet, which carry barges of 110 tons, and upwards, and inhabited by many persons of considerable capital; the trade of Reading, particularly with London, is pretty extensive. The wharf on the Kennet, belonging to Mr. Alderman Blandy, is very commodious for the export and import of goods; and his own establishment in the iron and coal trade is of some magnitude.

Large quantities of malt are made here for the London market; and not less than 20,000 sacks of flour are annually sent from hence to the same mart. The Abbey mills remain.

Five breweries are established in Reading. That of Messrs. Stephens is the principal. It produces about 25,000 barrels of beer and porter, annually. Some of the other breweries are likewise very considerable.

Manufactures. In the large building left by that munificent benefactor, Mr. Kenrick, who died nearly two centuries ago, a pin manufactory is carried on to some extent; and likewise in another part, the weaving of galoon, satin, ribands, and other light fabrics.

A floor-cloth manufactory, on a small scale, is also established in the same place; the cloth is afterwards sent to London to be painted. Some sail making, and twine and rope making, are likewise to be seen within this miscellaneous establishment, which was intended for the woollen manufacture, now lost; and where women may earn from 6*s.* to 10*s.* and men from 15*s.* to 25*s.* weekly.

There is another sail-cloth and sacking manufactory in the town, of greater magnitude. Gauze and silk handkerchiefs, and galoon, are likewise manufactured here; and 500 persons, at least, are employed in these fabrics, collectively.

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10. WALLINGFORD.

An ancient and respectable town, situated on the south bank of the Thames, about 46 miles from London. It contains four parishes; but has only three churches, 363 houses, and 1744 inhabitants. It is paved and lighted, and owes much to the exertions of the late eminent Judge Blackstone, who brought two turnpike roads through it, and whose mansion, now the property of his son, is one of the ornaments of the place.

Wallingford is governed by a mayor and aldermen, and returns two members to parliament, who are chosen by the inhabitants paying scot and lot. It is one of the four towns of the Vale.

Fairs. There are four annual fairs; the Tuesday before Easter, Midsummer-day, Michaelmas-day, and December 17. All these are extremely neglected, and almost lost, except Michaelmas fair, which is very large, and comes properly under the description of a statute fair.

Markets. There are two weekly markets, on Tuesdays and Fridays: the former is very inconsiderable, the latter is well attended, and much wheat and barley, besides other grain, sold by sample. The corporation, who have a right to tolls, dispense with their dues, in order to encourage the markets. Measure eight gallons. Provision plentiful, but not

not cheap. Much veal and poultry sent to London.

Commerce. About sixteen or seventeen malt-houses are established here, the owners of which chiefly trade with London. The *brown* malt is dried with beech billet wood; the *pale*, with coke and cinders.

Perishable provisions go by waggons to London, in about thirty hours. Malt, apples, and heavy articles in general, are sent by the Thames to the same place, which they reach with full water, in four or five days, but are seldom less than eight or ten days in returning, under the most favorable circumstances, in the present state of the navigation.

The brewery belonging to Mr. Wells is reckoned the largest in the county. About 150 quarters of malt per week, at the proper seasons, are converted into beer and porter.

Many hogs bred and fatted in the neighbourhood. Several bacon shops in the town.

Manufactures. The sacking manufacture is carried on to a small extent. Except this, a large tan yard is the only manufacturing establishment which deserves notice in the place.

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11. WANTAGE.

A pretty large market town by prescription, and the reputed birth-place of Alfred the Great, situated in the Vale of Berkshire, near the small river Ock, and the line of the Berks and Wilts canal, from which a cut is to enter the town. It stands on an elevation, below the White Horse hills, with a descent to the Vale, and is about 60 miles from London.

Wantage contains 489 houses, and 2,339 inhabitants. Few of the buildings, which are principally of brick, can be called elegant. The church, a handsome Gothic pile, is the chief ornament of the place. Twelve governors, under a charter of Elizabeth, manage a charity of about 400*l.* a year; but the town is governed by constables, and other peace officers.

Fairs. First Saturday in March:—First Saturday in May:—July 18.* These three fairs are for horses, &c. but are ill attended.

October 17, a statute fair; horses, cheese, hops, various wares, and articles of dress. The largest held here.

Markets. The weekly market is on Saturdays. Considerable quantities of corn sold by sample. Corn brought into the market on the market days pays 6*d.* a load!

Well supplied with provisions of all kinds. Beef and mutton about 7*d.* per lb.

Commerce. None but what is usual in market towns, except that many hogs are killed here, and their bacon thought superior to that at Faringdon, though by no means equal in quantity.

Manufactures. Considerable quantities of sacking and hammocks, for the use of government. Ten principal masters have establishments in the hemp manufacture; and five in making a kind of white cloth, called foulweather, chiefly for the use of the labouring poor. The water here is found excellently adapted for fulling. Many hands employed. The tan-yard belonging to Mr. Sylvester is one of

* A wool fair, under the auspices of the Agricultural Society of Berks, is intended to be grafted on this.

the

the largest in the kingdom, and is conducted on the most improved principle. The new art of tanning has been introduced, at an unbounded expence, but with the best success, by the proprietor, assisted by a German.* Hides can now be made fit for sale in half the time they were formerly, and without the smallest injury to their texture, which, on the contrary, is thought to be improved by the expedition used. Many experiments have been tried with different kinds of bark; but oak, as possessing the greatest quantity of *tanin*, is found alone to be depended on. Hence the necessity of paying every attention to the culture of this valuable tree, not only for its timber but its bark.

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12. WINDSOR

Stands on a bold eminence rising from the Thames, at the distance of 22 miles from London; and independent of the castle and its numerous local beauties, in itself is the most fashionable looking town in the county. In this respect it owes every thing to the court, which occasions the residence of various persons of rank and fortune attached to it, and an influx of numerous strangers to visit the castle and its delightful appendages and domains; hence the principal inns are in the first style of elegance, but extravagantly dear. The secondary houses of accommodation, however, are not unreasonable, considering the general expence of living and residence.

Windsor is a borough town, governed by a mayor and aldermen: the whole number of the corporation not to exceed thirty-two. It returns two members to

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* Mr. Desmond.

parliament,

parliament, who are chosen by persons paying scot and lot, the most unexceptionable mode of exercising the elective franchise, and which is the constitution of all the borough towns in this county. The number of houses is 553, and the population amounts to 3,436, exclusive of that part of the town which lies in the parish of Clewer,* containing 171 houses, and 688 inhabitants.

Fairs. Easter Tuesday.

July 5. This fair was once celebrated as a mart for wool.

October 25.

Markets. The weekly market by charter is on Saturdays, and is well attended. Corn is pitched, but it is said that too much is sold privately, by sample. The tolls are a pint out of every sack. Provisions plentiful, but dear.

On Wednesdays, eggs, butter, poultry, fruit, &c. are sold.

Commerce and Manufactures. The chief dependence is on the court and the company it brings; and therefore this cannot be ranked among trading towns.

Mr. Ramsbottom has a large brewery of beer and porter. Under the name of *Queen's* ale large quantities are sold. Mr. Jennings' brewery is likewise ex-

* In the poor-house here, some of the children are employed in the manufacture of straw hats, an elegant fabric, which deserves to be encouraged, as furnishing an easy kind of labour for women and children. St. Leonard's Hill being in this parish, the Honorable Mrs. Harcourt, a distinguished patroness of the industrious poor, has established a school on Mr. Lancaster's plan. In the neighbouring parish of Bray, Mrs. Townshend is patroness of a subscription spinning school. These examples of benevolence deserve to be recorded as a stimulus to others.

tensive,

tensive, and his liquor is dignified with the title of *King's* ale. Both are flourishing, but it is said that less of both the *King's* and *Queen's* ale, as it is called, is sold at a distance than formerly. The internal consumption, however, must always be considerable.

The village fairs in Berkshire are as follow:—As they are severally of little consequence, except to their immediate vicinity, I forbear to extend this article by enumerating the particular traffic carried on at each.

Aldermaston, May 6.—July 7.

Bracknell, April 25.—August 22.—October 1.

Cookham, May 16.—October 11.

East Hagbourne, Thursday before October 11.

East Hendred, October 11.

Finchampstead, first Wednesday in April.

Mortimer, Stratfield, April 27.—November 6.

Newbridge, March 31.—Sept. 28.

Swallowfield, June 9.

Thatcham, second Tuesday after Easter week.—First Tuesday after September 29.

Twyford, July 26.—October 11.

Wadley, April 6.

Waltham St. Lawrence, August 11.

Yattendon, October 13.

Whether I should notice Chapel Row Revel, as it is called, in the parish of Bucklebury, among statute fairs, or merry makings, I am rather uncertain. It seems to partake of the nature of the latter, and has been represented to me as a nuisance to the neighbourhood. A great number of country people assemble there on the first Monday in August, with the ostensible object of hiring themselves as monthly servants, or harvest labourers, to the farmers round the country. No doubt this

this is attended with some conveniences; but I am told that it is perverted from its purpose, and that cudgel-playing, and various irregularities take place, which it would be the duty of the magistrates to check.

Berkshire cannot be considered as a manufacturing county, as from the returns made to parliament in 1801, out of a population of 109,215, only 16,921 were engaged in trades, manufactures, or handicraft. Exclusive of the commerce carried on by the navigations, and mentioned under that head, or in the present section, I have nothing to add. There certainly are corn and other mills in the different parts, which increase the aggregate of trade, but which deserve no particular notice. As to local manufactures for internal consumption, it is impossible to notice them. The only manufacture of any im[illegible]nce, not connected with some town, and already mentioned, except perhaps potash at Milton, is that of COPPER at the TEMPLE MILLS,* between Hurley and Bisham, but in the latter parish. These mills are the most powerful and complete of any of the kind in the kingdom, and are the property of Owen Williams, Esq. M. P. for Marlow, whose elegant modern seat, called Temple House, adjoins them, and who is likewise one of the proprietors of the Pary's copper mines in Anglesea. The ore is brought from the last mentioned place to be smelted at Swansea, and being formed into cakes and ingots, from three quarters to a hundredweight, is carried by the Severn trows to Brinscomb Port, on the Thames and Severn canal, and then by the flat-bottomed Thames barges along its course to the mills.

* It appears that they derive their name from the Knights Templars, to whom they once belonged, and that they have been applied to various purposes, at different periods.

In

In time of war, the copper is manufactured chiefly into bolts and sheathing for ships, for the use of government. In peace, various kinds of sheets are formed for different domestic purposes, and for foreign trade.

About fifty men and boys are employed in this establishment, which consists of a hammer mill, a bolt mill, and a flat rolling mill, wholly worked by water. From 600 to 1,000 tons of copper are annually manufactured here. The men are paid by the great, or piece-work.

SECT. VII.—POOR.

It has been the constant remark of political writers, that in this country more attention is paid to punish than to prevent crimes; and sure I am, that if half the trouble and expence was incurred to prevent poverty which is taken to relieve it, the lower orders would be infinitely, more comfortable than experience and observation convince us they are.

"Labour," says Dr. A. Smith," is the fund which originally supplies a nation with all the necessaries and conveniences of life which it consumes." If this position, which appears incontrovertible, applies to a period antecedent to civilization, it must be admitted, that when social and civil order was established, the triple union of *land*, *stock*, and *labour*, formed the basis of every valuable possession. It is in vain that the proprietor of land boasts of the extent of his domains, if no one will till the soil; or that the merchant or manufacturer commands stock, without hands to render it productive. The importance of labour is thus established without further argument; and though in every well regulated

regulated society, they who possess hereditary or acquired property will always be secured in their rights, and in consequence of those rights will be entitled to the enjoyments they confer, it must be allowed, that they who labour with a proper degree of diligence, ought likewise to acquire the necessaries of life by their own industry; and not be rendered dependent on others, or become a tax on the bounty of their employers.

Since the poor laws, however, were established, however humane and judicious in their first institution, by affording a certain provision for infancy and age, we find pauperism has been continually increasing, and that with growing wealth, the labouring poor have become more and more numerous and depressed. The law of settlement, the restrictions on the amount of wages, and, above all, the inadequacy of wages in agriculture to support a family, have created and kept up that enormous mass of ills, which are equally distressing and disgraceful.

In consequence of this, the labouring poor too frequently lose the pride of independence,* the best guardian of every moral virtue; and finding it in vain to struggle with their fate, become careless and improvident, clamorous and dissatisfied. They are more ready to demand their legal rights from the parish to which

* In Scotland, though comparatively a poor country, it would be esteemed a stigma to the third generation, if a person, almost under any circumstances, received part of the voluntary collections that are made every Sunday in the churches. I have heard the moral and frugal habits of the Scotch ascribed to their superior education; but though this is undoubtedly an auxiliary, it is from their laudable pride, and their love of independence, that their best qualities take their rise.

they

they belong than to perform their proper duties; and thus give a colour to the injurious imputations which are cast upon their conduct and principles.

The characters of men are influenced by circumstances, and are formed by habits; and the only effectual means, in my opinion, of ameliorating the condition of the labouring poor, and of giving them honorable feelings and impressions, is to assist and direct their endeavours in the path of independence.

The first step is to render their cottages comfortable, and to give them an interest, if possible, in this kind of property, which is dear to every mind not wholly lost to sensibility and reflection. In a former section I have delivered my sentiments on this subject, and I wish to enforce them here. Nothing would more tend to make men good labourers, good husbands, good fathers, and good subjects, than a property in their homes, or an assurance that they would not be dispossessed, except by their own misconduct, with such a portion of land for a garden, &c. as would employ their leisure hours, without drawing them off from their regular engagements.

It is wonderful how much may be produced from a small spot of ground, well managed, both for the use of families and for sale. The family of Anns, residing in the village of Steventon, consisting of a brother and two sisters, between eighty and ninety years of age, lately, or now, with the addition of a very small independent property, maintained themselves by raising flower roots and small shrubs in their little garden, which they sold round the country. With less industry and ingenuity, in various parishes, I have found that the produce of the orchard, in favorable seasons, has paid the rent of the premises, and sometimes that

geese

geese or pigs, where there was an opportunity of keeping the former, have yielded the same advantages. A certain quantity of land attached to cottages is therefore indispensable, and in country parishes it might always be attainable.

To those of superior industry or acquirements, the road ought likewise to be open of rising to the occupation of a small farm, which the general division of land in this county, would render no unattainable object to the truly meritorious.

But as instances of this kind will be rare, and must ever depend on themselves, it is unnecessary to enlarge on that subject. I shall only cursorily observe, that though inimical to very large farms, I by no means ascribe the prevailing pauperism solely to this cause.

Next to the comforts of a residence, to which I would wish the poor to be attached by interest as well as choice, it seems necessary to teach them the value of property, and to point out the way by which it may be acquired. The duty that survives hope will seldom be performed with energy or effect. While the wages of a labouring man is perhaps only nine shillings a week, except when he works by the great, if he has a family too young to assist his endeavours, it is wholly impossible that he can support himself and them; and therefore, instead of being more frugal and œconomical, he becomes indifferent about expence; instead of seeking resources in industry, he tries to bury reflection in the dissipation of the ale-house; and weary of struggling with fortune, sinks into a parish pauper, and loses the dignity of a man.

It must, however, be admitted, that with a large family, no fair and reasonable wages will enable a labourer to acquire even the bread necessary to support life;

life; and therefore, in addition to his daily or weekly pay, it will be requisite to give him an interest in some fund, on which he can draw without shame, and without the humiliating sense of obligation. For this purpose, parochial friendly societies should be established, to which every servant and labourer should be obliged to contribute, without regard to sex, on arriving at an age when they can provide for themselves; and to continue subscribing till the age of sixty, even if they should be drawing largely from the fund, to which they are contributing only in a small degree.

And in order to render this adequate to the demands arising from ill health, or an increase of family, and other incidentals, the proprietors of land and houses should be invited to join the society, and the occupiers of both assessed in fair proportions, according to the necessary expenditure; while those not chargeable to church and poor, should in no case be obliged to pay more than their regular subscription. It would likewise be a judicious regulation, to allow pecuniary premiums or honorary distinctions to such labouring people as brought up children to the age of fourteen, respectively, without claiming any aid from the fund, except during illness, or when they were thrown out of employment; and when a man had laboured with a fair character till he was sixty years of age, he ought to receive from the same source, a small annuity for life, as a reward for his past services, but not sufficient to keep him idle, if still able to work. In this case, parish rates for purposes unconnected with the poor would alone be required, and poor rates would lose their name.

I do not presume to enter into the details of the plan I have proposed, to effectuate the objects of doing away poor rates, as I am aware that legislative provisions would

would be necessary, and that the system must receive more attention to perfect it than I can bestow; but should it only be adopted to a limited degree, as far as establishing a friendly society, according to the common acceptation, in every parish, or in every two or three adjoining parishes, where the population is small, I am deeply impressed with the benefit that would result from it; particularly if the proprietors and occupiers of land were to become honorary members, and to countenance the society by attending their meetings, and assisting to regulate their affairs. Double the ordinary subscription, and disclaiming any demands on the fund, would be sufficient to constitute an honorary member; and the sum thus applied would be more than saved to parishes, during the illness of the poor, or their incapacity to work. But it is not to a saving only that I confine my views; it is a principle of independence I wish to establish, of more value in its consequences than any immediate diminution of expence. The whole number of persons belonging to friendly societies in Berks, in 1803, amounted only to 2,843, which is very far below the proportion in the neighbouring counties, and proves that in this, expenditure is less regarded than a little personal trouble.

There are various regulations of a subordinate nature, which might be grafted on the present system, and which would all, more or less, tend to promote the independence and comfort of the poor. Premiums might be proposed for such persons as had reared families of three or more children to maturity, without parochial relief;* and an annuity on the approach of age, for an

* This should not be wholly confined to parishes; but, in order to give more distinction to the meritorious, the Agricultural Society of Berks might bestow a medal on such as produced the necessary certificates.

industrious

industrious and regular life, would at once be a stimulus and a reward.

I would likewise recommend that labourers in agriculture, should be paid any part of their wages that was agreeable to themselves, in flour, barley, or other grain, at the lowest market price, and in any quantity required. This would at once check improvidence, and promote comfort. With regard to farmers keeping a milch cow or two, according to the magnitude of their bargains, for the use of their labourers, I have, under the section *Cottages*, already delivered my opinion. If difficulties should occur in carrying this benevolent measure into effect, a certain number of cows for the same purpose might be kept at the joint expence of the parish, and the milk sold to the poor; which would be infinitely better than allotting land to individuals, to keep those useful but expensive animals.

The number of public houses is unquestionably a nuisance; and that country is in a lamentable state where the Machiavelian principle of "private vices being public benefits," is acted on, however much it may be disguised. The poor, however, not only require, but are entitled to comforts and occasional relaxations; and if they cannot brew their own beer, it would be a humane and charitable action if the persons by whom they are employed, would allow them from time to time a certain quantity of table beer at prime cost, without being subject to any duty. To the gentleman or the farmer, the trouble of brewing a few bushels or quarters of malt extra, would be but trifling—to the poor the accommodation would be great.

Connected with the amelioration of the condition of the poor, a virtuous education is also indispensably requisite. Their duty to God, to their neighbour, and themselves,

themselves, they should have an opportunity of knowing, not by accident, but by systematic arrangements. Where the parent is unable, the parish officers should see that every child be taught by some competent person, to be paid by them, the principles of religion, and the practice of morals. Families of children should be sent alternately, week by week, to the village school, at such an age, or at such a season of the year as they can be best spared. The child who had been its week, would receive instruction from the brother or sister then attending it, and communicate its acquirements in return; emulation would be excited; and a few months in their lives would be sufficient to give such an education as the sphere of life in which they are to move would require. Sunday schools, in the greatest part of the towns in this county, are very flourishing; and they in a great measure supply, where they are established, the want of other modes of elementary instruction to the children of the poor. It is delightful to observe, in some of the towns, all ranks and sects uniting in the support of those human establishments; which, when confined to their proper objects, must have a happy effect on the rising generation.

The diffusion of knowledge is by no means incompatible with the most persevering labour: on the contrary, it is likely to render it more beneficial, both to the individual and to the public: a sense of religion will convert the task into a duty, and will make the heaviest burden light: it will inspire content; it will teach resignation; it will direct to heaven.

The peasantry of this county, from the presence of persons of superior rank and fortune in almost every parish, have acquired a considerable degree of urbanity, and partake in some measure of the character of their employers

employers and masters. I have found among them men who, if they had possessed an education equal to their natural understanding, would have shone in the higher departments of business; and who, under the circumstances in which they are placed, prove valuable members of the community. The commission of atrocious crimes is rare in Berks; and the vigilance of an excellent magistracy co-operates with the natural mildness and orderly conduct of the natives, to prevent the frequency of vicious excesses. The lower classes are a hardy and personable race, patient of labour, but impatient of control, when they think it improperly exerted. In a word, they have a laudable pride, which, properly regulated, might be productive of the best consequences, and would lead to that love of independence, which I assume as the foundation of all moral excellence; because it cannot be separated from industry, frugality, and honorable conduct!

SECT. VIII.—POPULATION.

If agriculture is wealth, population is power; and they naturally act reciprocally on each other. Where the produce of the earth is abundant and reasonable, early marriages will be contracted among the labouring poor, and their families will stand a greater chance of being reared to maturity than where provisions are scarce and dear. It is the high wages of manufacturers and handicraft trades, however, that chiefly encourage and promote early marriages. The difficulty of obtaining a comfortable establishment from the wages of agriculture, keeps a considerable number of farming

servants single; yet when they do marry, it is found that more of their children arrive at manhood than of those who are cooped up in towns, and confined to the loom or the anvil.

On the whole, it is evident that the population of the kingdom, in general, has been regularly increasing, and this will ever be the prime stimulus to agricultural pursuits. Except from circumstances not in the power of man to control, the supply will always be in some proportion to the demand; and should ever the time arrive, in which we can no longer depend on foreign importation, not only for a season but for years, it will infallibly be found, that the quantity of corn raised in the country will ultimately be equal to the consumption required.*

Though the consolidation of farms may have had a considerable effect in preventing a proportionate increase of population in country villages, towns have risen into consequence from this very cause, and manufactures have been established, or trades carried on, with the capitals which would otherwise have been employed to cultivate the ground, not so much for a surplus as to gain a sustenance.

When the clothing trade of Newbury was at its greatest height, about the year 1555, it appears from the returns made to Cardinal Pole, that the inhabitants amounted to no more than 1,600, whereas, in 1801, they were 4,275. At the same period, Reading contained 2,500 inhabitants, which were increased, at the last enumeration, to 9,742. Other towns in the county have

* Trusting, however, to importation, and the checks in the road to improvement operating against us, our internal growth of corn for many years has been inadequate to the demand.

likewise

likewise increased in population, though not all in the same proportion; and even the villages in general are better peopled than they were half a century ago.

From a calculation made by Dr. Beeke, it appears, that at the time of the Norman survey, Berkshire contained from 40,000 to 45,000 souls. In 1377, he supposes the number was nearly the same; and he accounts for this want of increase, by the operation of pestilence and other destructive events. In 1700, the population of this county is said to have been about 75,000. When the enumeration, however, was taken by act of parliament in 1801, the number of inhabited houses in Berkshire amounted to 20,573; of uninhabited to 622; and the whole population was 109,215. Of this, 52,821 were males, and 56,394 females. It appeared likewise, that 38,155 persons were chiefly employed in agriculture, and 16,921 in trades, manufactures, or handicraft. In two or three parishes, where I have had an opportunity of ascertaining this fact with some degree of accuracy, I find the population is still rapidly on the increase.

The following table is taken from the parliamentary documents as exhibited in the first volume of the "Magna Britannia," with some few variations and corrections. The number of acres, &c. in each parish is from Rocque, with corrections where circumstances allowed me to give the contents with more precision than could be expected in a general survey.

		Inhabited houses.	Uninhab. houses	Families.	Persons.	Rocque. Number of acres.	Real number.	Remarks.
Abingdon		867	22	1037	4356			
—Barton	Townships of Abingdon	1	0	1	13	3528		
—Norcot		14	1	14	69			
—Shippon		29	0	29	128			
Aldermaston		182	0	142	672	4305		Woolhampton parish and Aldermaston are thrown together by Rocque
Aldworth		50	4	50	273	1804		
Appleton		65	3	87	341	2049		
Arborfield		29	2	42	171	1301		
Ardington		65	2	65	344	2191		
Ashampstead		58	1	70	314	2044		
Ashbury		122	0	142	654	4748		
Aston Tirold		60	2	60	294	2554		
Avington		13	0	13	57	1211		
Barkham		37	4	39	185	1562		
Basildon		127	5	185	623	2904		
Beech-hill	A tithing of Stratfield Save, which parish lies chiefly in Hampshire	35	2	35	184			
Beedon		62	1	62	303	1747		
Beenham		70	2	73	381	2773		Rocque has included Padworth in Beenham.
Besils Leigh		19	0	20	99	912		
Binfield		150	8	178	808	3303		
Bisham		86	0	114	596	2986		
Blewbury		120	4	120	553			
—Aston Upthorpe	Blewbury parish	37	2	39	196	5947		
—Upton		47	4	57	217			
Boxford		37	1	59	293			
—Westbrook	Boxford parish	23	0	28	123	2483		
Bradfield		153	6	153	678	3632		
Bray		506	21	526	2403	8558		
Bright-walthan		78	0	80	420	2049		
Brightwell		101	5	110	491	2029		
Brimpton		84	1	88	389	1656		
Buckland		128	1	158	690	4142	4422	
—Carswell	Buckland parish	8	1	9	37			
Bucklebury		215	3	223	1122	8123		Stanford Dingley is included in Bucklebury.
Burghfield		130	2	146	738	3993		
Buscot		75	2	83	409	2778	2909	
Chaddleworth		61	1	77	385	3393		
Chieveley		170	1	171	795			
—Leckhampstead	Fithings of Chieveley	43	1	65	330	7987		
—Winterbourne		64	0	66	357			
Childrey		81	3	84	402	2508		
Chilton		48	2	48	244	1432		
Cholsey		161	6	162	814	6114		
—Moulsford	Cholsey parish	32	1	36	152			
Clewer		191	4	213	1007	1527		
Coleshill		51	0	69	261	1886	1820	
Compton		97	2	102	488	3490		
Compton - Beauchamp		23	0	23	119	1320		
Cookham		325	9	346	2239	6107		
Great Coxwell		43	4	59	241	1261		

Cumner

		Inhabited houses.	Uninhab. houses.	Families.	Persons.	Rocque. Number of acres.	Real number.	Remarks.
Cumner		63	0	91	406			
—Botley		18	2	18	68			
—Bradley		1	0	1	7			
—Chawley	Cumner parish	13	0	13	72	8841		
—Chilswell		1	0	1	7			
—Hillend		13	0	18	64			
—Stroud		11	0	12	64			
Denchworth		33	0	44	229	723		
Drayton		90	3	90	484	1760		
Dudcot		34	0	38	181	1116		
Eaton Hastings		22	1	20	137	1233	1526	
Enborne		46	4	58	275	2466		
Englefield		62	0	119	336	1372		
Faringdon		304	5	381	1691			
—Little Coxwell		42	1	51	225			
—Hospital	Faringdon parish	7	0	7	48	4686		
—Littleworth and Thorpe		32	0	34	189			
Farnborough		42	0	43	213	2210		
Fawley		25	2	38	186	2615		
Finchampstead		83	1	96	463	3854		
Frilsham		42	3	42	186	837		
Fyfield		67	5	82	315	1520		
East Garston		111	2	128	609	4158		
Goosey		21	0	27	139			A chapelry of Stanford in the Vale.
Gramponnd*		36	1	42	172			
East Hagbourn		102	2	113	499			
—West Hagbourn	East Hagbourn parish	39	1	38	196	2673		
East Hampstead		87	4	114	566	4918		
Hampstead Marshall		49	0	67	291	1657		
Hampstead Norris		166	5	173	855	5798		
West Hanney		70	4	74	330			
—East Hanney	West Hanney parish	112	0	115	535	4064		
—Lyford		24	0	30	124			
Harwell		122	0	141	671	2100		
Hatford		19	0	19	114	1073		
East Hendred		118	5	153	683	2984		
West Hendred		62	5	68	309	1926		
North Hinksey		25	0	30	111			Included in Cumner.
South Hinksey		36	2	40	162			
Hinton		54	1	54	275	2102		
Hungerford†		383	15	402	1987	2794		
Hurley		170	0	179	915	4047		
Hurst‡		55	0	63	258			
—Newland liberty		116	4	117	616	6623		
—Whistley liberty	Hurst parish							
—Winnersh lib.		64	5	82	329			
East Ilsley		112	2	135	512	3253		

* In Berkshire, but within the parish of St. Aldates, Oxford.

† Part of Hungerford lies in Wiltshire. It contains 56 houses and 305 inhabitants.

‡ The liberty of Hinton likewise belongs to Hurst parish, but is an insulated part of Wilts in the hundred of Amesbury, contains 76 houses and 406 persons.

West

		Inhabited houses.	Uninhab houses	Families.	Persons.	Rocque. Number of acres	Real number.	Remarks.
West Ilsley		48	0	63	341	3187		
Inkpen		127	7	127	590	3063		
Kintbury		282	8	332	1430	6963		
Kingston Bagpuze		56	1	63	280	1139		
Lambourn		197	3	220	964			
—Upper Lambourn		64	0	75	346	13851		
—Blagrave	Lambourn parish	65	2	72	337			
—Eastbury and Bockhampton		79	1	83	398			
Langford		79	1	85	356			An insulated parish.
—Little Faringdon	Langford parish	23	1	27	131			Insulated by Oxfordshire.
Letcombe-Basset		45	0	45	235	1583		
Letcombe-Regis		95	1	98	394	4268		
—East Challow	Letcombe-Regis	53	2	55	229			
—West Challow	parish	27	0	27	185			
East Lockinge		57	2	59	245	1787		Rocque confounds East and West Lockinge. The latter is only a hamlet of Wantage, and contains about 800 acres: the former is said to contain upwards of 2000.
Longworth		79	0	85	401			
—Charney	Longworth parish	40	1	43	216	4125		
—Draycot-Moore		20	1	27	141			
Marcham		144	0	144	607			
—Frilford	Marcham parish	23	2	31	148	6421		
—Garford		37	1	40	183			
Maidenhead*		156	4	179	949			
Milton		66	0	66	310	1373		
North Moreton		55	2	64	282	1058		
South Moreton		72	3	74	320	1080		
Newbury		931	34	971	4275	1705		
Padworth		44	0	48	218		1240	See Beenham.
Pangbourn		78	2	131	593	1663		
Peasemore		54	0	56	266	1942		
Purley		27	1	27	153	952		
Pusey		16	2	16	65	975		
Radley		46	0	78	368			In this Sunningwell is included by Rocque.
—Thorpe-wick	In Radley and Sunningwell parishes	3	0	4	25	4798		
—Kennington		17	2	21	86			
Reading (St. Giles)		651	10	769	3416			
—Whitley	Parish St. Giles	4	0	4	28	4632		
—St. Lawrence		561	13	706	3170			
—St. Mary		539	9	660	3156			
Remenham		56	2	66	299	1620		
Ruscomb		27	0	37	170	1172		
Sandhurst		34	2	43	222	4870		
Sandleford		3	0	3	18		500	Annexed to Newbury.
Satwell		25	3	30	68	701		A hamlet to Wallingford.
Seacourt	Extra parochial	7	0	7	30	865		
Shalbourn†		92	0	109	502	1816		

* This town lies in the parish of Cookham and Bray, and its population seems to have been included in them respectively. In the aggregate, however, there have been omissions rather than repetitions.

† Part of this parish lies in Wilts. It contains 52 houses and 272 inhabitants, exclusive of the above.

Shaw

		Inhabited houses.	Uninhab. houses.	Families.	Persons.	Rocque. Number of acres.	Real number.	Remarks.
Shaw and Donnington		96	5	101	424	1708		
East Shefford		9	0	16	70	1019		
West Shefford		88	2	90	422	2112		
Shillingford		53	1	65	253	1539	1704	
Shilton*		40	0	56	253			Insulated by Oxfordshire.
Shinfield†		96	4	100	462			
—Hartley-Dummer	Shinfield parish	45	1	51	252	4116		
Shottesbrook		17	0	20	94	963		White Waltham is included in Shottesbrook.
Shrivenham		112	0	127	611			
—Bourton		52	0	53	257			
—Fearnham	Shrivenham parish	26	1	34	158	8130		
—Longcot		68	2	75	368			
—Watchfield		57	1	61	305			
Speen		71	0	71	408			
—Benham		42	1	55	256			
—Speenhamland	Speen parish	140	7	148	712	3355		
—Wood Speen and Bagnor		79	10	91	371			
Sparsholt		76	4	87	410			
—Kingston-Lisle and Farlow	Sparsholt parish	34	0	49	261	5351		
Stanford in the Vale		124	5	132	607	2879		
Stanford-Dingley		28	3	28	133			Included in Bucklebury.
Steventon		101	8	130	537	2168		
Stratfield Mortimer		128	4	131	694	1071		
Streatley		106	3	106	556	2168		
Sulham		19	1	23	118	685		
Sulhampstead Abbots		51	2	66	305			
—Griesley liberty	Sulhampstead Abbots parish	17	1	20	87	1899		
Sulhampstead Bannister		46	1	64	259	1166		
Sunning, including Woodley		187	4	228	1111			
—Early liberty	Sunning parish	73	2	78	436	7017		
—Sandford		23	1	27	122			
Sunninghill		138	20	155	700			
Sunningwell		34	0	39	197			Included in Radley.
Sutton-Courtney		141	1	166	874			
—Sutton-Wick	Sutton-Courtney parish	36	1	39	198	3923		
—Appleford		36	2	37	200			
Swallowfield		165	4	174	890	3756		
Thatcham		407	17	419	1995			
—Greenham		132	3	135	683	11491		
—Midgham	Thatcham parish	43	0	58	340			
Tidmarsh		24	3	27	134	683		
Tubney		13	0	13	79	822		

* The church stands in Oxfordshire; the parish is insulated by that county.

† Not included in this return, are 29 houses and 155 inhabitants, in a part of the parish lying in Wiltshire.

Tylehurst

		Inhabited houses	Uninhab. houses	Families.	Persons.	Rocque Number of acres.	Real number.	Remarks.
Tylehurst		254	8	262	1353	5144		
Uffington		76	6	109	432			
—Balking	Uffington parish	31	0	32	173	5484		
—Woolston		38	0	57	208			
Ufton		53	0	67	334	2232		
Wallingford	All Saints parish	17	0	18	80			
—Clapcote	All Saints parish	8	0	8	55			
—St. Mary the More		154	3	184	721	1357		
—St. Peter		75	1	80	396			
—Wallingford Castle	Ex. parochial	3	0	3	14			
Lawrence Waltham		111	7	116	572	3525		
White Waltham		115	6	116	552			Included in Shottesbrook.
Wantage		473	16	493	2339			
—Charlton		46	2	56	247			
—Grove	Wantage parish	93	2	95	397	6417		
—West Lockinge		14	0	14	60			
Warfield		158	2	161	820	3232		
Wargrave		222	3	276	1134	3970		
Wasing		9	0	18	102	649		
Welford		170	4	193	866	4829		
Old Windsor		118	6	132	669	6230		
New Windsor*		507	33	580	3122			
—Didworth	Windsor parish	13	0	15	75	2579		
Windsor Castle		0	0	0	239			
Winkfield		258	9	293	1465	9414		
Witham		40	0	58	246	1700		
Little Wittenham		23	2	25	134	1036		
Long Wittenham		94	0	116	451	1942		
Wokingham		280	18	314	1380	8248		
Wokingham† par.	Town not included	135	4	144	647			
West Woodhay		22	2	29	109	1476		
Woolhampton		43	0	60	322			Included in Aldermaston.
Wotton		43	0	48	236			
Yattendon		52	1	52	253	1553		Included in Cumner.
Catmore with the hamlet of Lilly, not included in the parliamentary returns, contains		13			69	676		

* Exclusive of 171 houses and 688 inhabitants, in the adjoining parish of Clewer.
† The church stands in Wiltshire.

CHAPTER XVI.

OBSTACLES TO IMPROVEMENT, INCLUDING GENERAL OBSERVATIONS ON AGRICULTURAL LEGISLATION AND POLICE.

THE grand obstacles to agricultural improvement, whether taken in a popular point of view, or as founded on substantial reasons, may be reduced to the following heads:

1. TITHES.

It has been usual with writers on agriculture, to place tithes among the principal discouragements to improvement. That they may sometimes operate in this way, I will not pretend to deny; but considering them in the light of a rent or a tax on the land, or produce of the land, generally well ascertained in their nature and extent, and depending whether they will be strictly exacted or not on the will of the incumbent, it behoves the farmer, when he is making a bargain, to take their full value into the estimate; and then it can be of little consequence if he pays a certain proportion of rent to the clergyman, or the whole to the proprietor of the soil.

Where lands are exonerated from tithes, they are generally let for more than both the incumbent and land owner, collectively, receive in other cases; and therefore

therefore it is prejudice rather than reason which influences the cultivator to pay with reluctance to the church that portion which he knows justly to belong to it; and to consider the proprietor of the land as the only person who is entitled to receive the full value of his property. It must be admitted, however, that when tithes are taken in kind, there is something in it peculiarly vexatious to the farmer, and grating to his feelings; but I aver that nine times out of ten, the rector or vicar is driven to this alternative by the awkwardness and opposition of his parishioners. To a system, however, which admits the possibility of a misunderstanding, between those where peace and harmony should invariably reign, strong objections may justly be started; but on this subject I have already candidly stated my opinion. Neither popular prejudice nor the *esprit de corps* have, I trust, biassed my sentiments; and I submit them to public discussion with the consciousness of meaning well.

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2. THE WANT OF LEASES.

It was a question put by the well-informed and ingenious Secretary of the Board to some tenants at will, if they would not give four or five shillings in the pound rent more, to have the security of leases? As may naturally be supposed, they hesitated in giving the affirmative answer; but I have little doubt their opinion was with him, and that arable land, under a lease, may be improved by a good tenant, so as to enable him to pay an additional rent, and at the same time to reap a considerable surplus profit for himself.

The story told of the Irishman, who preserved the most

most perfect composure in a storm which was ready to tumble the house about his ears, and who accounted for his indifference by observing, "that he was only a lodger," is a pretty correct picture of the situation of a tenant at will, on a farm which requires the united aids of capital, labour, and expence, to render it as productive as it might be made. In the competition, indeed, which now exists for bargains, from the prevailing consolidation of farms, persons must not pretend to ask more than the land owner is willing to concede; but I never heard of that tenant who did not prefer a lease, when it could be obtained; not only on the score of security, but to justify him in laying out money on improvements, even though they were as likely to benefit the proprietor as himself.

Such being the case, it is to be lamented that some plan of reconciling the interests of both parties cannot be devised, unexpensive in itself,* and unproductive of future inconveniences to either. The want of leases on corn farms must infallibly be a bar to improvement; and the progress which agriculture has made in this county above some others, may in a great measure be ascribed to that permanent security which a numerous and respectable yeomanry have in their possessions, and the example of gentlemen of superior fortune, who occupy part of their estates, and enter into all the details of management with as much attention and assiduity as if their subsistence depended on their care. Where land, as might be instanced in parts of Mr. Loveden's

* For instance, the stamp for leases should be small, and on an ascending scale, according to the rent; and the conditions and covenants should be so few and so liberal, on both sides, as to afford little room for future disputes.

extensive

extensive farm in his own occupation, has been rendered worth upwards of a guinea per acre, which little more than twenty years ago was scarcely worth five shillings, it is an argument that cannot be refuted—that security is the very soul of improvement, and that even unlimited capital in the hands of a prudent man, will never be partially risked without the fair prospect of a return; not depending on the will of others, but on one's own judgment and industry.

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3. COMMON FIELDS.

The want of a general inclosure, and the enormous expences attending private bills of this kind being carried into execution, are not only checks on agricultural improvement, but in many instances render it impossible. A common field bargain, in which many have an interest, but no one can be said to have an exclusive property, can neither be cultivated, drained, manured, or managed with any degree of spirit or effect. As for wastes, however productive they are susceptible of being made, they are inevitably devoted to sterility and neglect, till allotted to individual owners; and it may be said in regard to all property, not in severalty,—

> The lands that many owners share,
> Can never know an owner's care.

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4. POOR RATES.

The poor rates are unquestionably another very important drawback; and by diminishing the income of the

the cultivator, prevent him, even under the most favorable circumstances, from having so much to spare for improvements as he otherwise would have. In the preceding Chapter, as well as in Chapter IV. Section IV. this subject is discussed at some length; and I beg leave in this place to reiterate my arguments in brief, that the most effectual means of ameliorating the condition of the poor, and of rendering them less dependent on parochial relief, would be to allow them comfortable cottages, and such a portion of land as would enable them to keep pigs and poultry, raise useful vegetables, and fully employ their leisure time, without interfering with their daily labour. In short, put the means of independence in their power, teach them the value of industry and economy, by shewing them the comforts they yield; and though, from the condition of human life in civilized society, pauperism must always exist, the clamours of mendicity, and the sight of squalid want and misery would much less frequently reach the ear, or pain the eye.

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5. TAXES ON AGRICULTURE.

Under this subject may likewise be placed the heavy taxes on agriculture. These, at this period, in a direct and indirect form, cannot amount to less than one-fourth of the rent on an average; perhaps I am under the estimate; and of this burden, the direct taxes till very lately were a mere trifle.* Hence, so much must be

* The tax on horses, however, whether used in agriculture or otherwise, is one of the most patriotic that ever was imposed, and should rather be increased than diminished. For though it must at present be pretty heavily felt, it does not appear that ox teams are becoming more common,

drawn from the comforts or the profits of the farmer; and in either case he will have less to expend on the soil, though the increased demands on him require every exercise in his power of labour, judgment, and expence.

I am fully aware that the necessities of the state require, and I trust the patriotism of the subject will ever incline him to pay the very large aggregate sums now imposed, for the defence and support of all that can be dear to men; but in apportioning the taxes in such a manner as may be least oppressive, and produce the best effect, all the wisdom of legislators and statesmen should be brought into action. With the greatest part of our rulers, for the last century or two, commerce has been the idol to which every thing has been sacrificed. A national debt of five hundred millions, an annual expenditure so enormous as almost to stagger belief that it could be raised, attest this truth, without the necessity of a single argument: for it will never be contended, that of the millions of debt which are ready to overwhelm us, one-fiftieth part was ever incurred by agriculture and internal improvement. Manufactures and agriculture go hand in hand, and encourage each other; but foreign commerce and colonial possessions are certain drains on the mother country, for the benefit of comparatively few; as they must be supported by wars and taxes, beyond their relative worth. "Britain independent of Commerce,"* is probably only an

common, or that horses for pleasure are lessened in number, or maintained at a more moderate expence. A premium to every person beginning to keep an ox team, and continued for three years, by which time interest would be a sufficient encouragement, would be a powerful incentive to many farmers, and produce several national benefits.

* See Mr. Spence's pamphlet under that title.

ingenious

ingenious chimera; yet whenever peace is restored, the other nations of the world will infallibly come in for their share, and therefore it would be policy to seek resources within ourselves before it is too late; and these, agriculture, fisheries, and useful arts, abundantly supply.

The very trifling sum assigned by parliament for the encouragement of agriculture, under the direction of the Board of that name, has already produced more beneficial consequences than an hundred times the sum expended on any other object that can be named. And when the principles of the Board are better understood, and its suggestions more universally regarded, we may expect, even with its very limited means, still greater and more important effects from its labours. From what it has already accomplished, it is to be hoped that this country, even with an increasing population, will never more be driven to the necessity of trusting to foreign nations for a supply of corn.

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6. EXPENCES OF LABOUR.

The increasing expences of labour which, however, are still inadequate to the support of those who are engaged in agriculture, would deserve to be considered as a drawback on improvements, were not the poor rates proportionably diminished by the allowance made to the labouring cultivator of the soil. This topic therefore may be dismissed without further comment, particularly as it has been already treated at some length in another Chapter.

A voluntary, but heavy charge, on agricultural labour is likewise incurred, by keeping so many horses, where

where a smaller number would be sufficient, or where oxen might supply their places.

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7. RESTRICTIONS ON OCCUPATION.

Restrictions on occupation and management, which are frequently founded on theories long since exploded, and on customs now obsolete, are undoubtedly inimical to agricultural improvement. The laws that regulate landlords and tenants require revision; and a code judiciously drawn up for this purpose, and sanctioned by proper authority, would go a great way to put an end to disputes, and to expensive litigations; where the letter, rather than the spirit of an agreement, is made the rule of action.

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8. PREJUDICES.

The prejudices of the farmers themselves are the last obstacle I shall notice, to a more general system of improvement. These, by the collision of opinions, by the diffusion of knowledge, and by the labours of the Board of Agriculture, are daily giving place to a better order of things; yet still much is to be done, to enlighten and inform the mass of cultivators. Agriculture, which in fact requires an intimate acquaintance with natural history in all its branches, and with chemistry and mineralogy in particular, is seldom conducted on scientific principles, without which experiments must ever be unsatisfactory, and results vague, for want of proper data.

Yet it must be allowed, that it is not always the man of science who is found to make the most successful cultivator;

cultivator; and hence ignorance is hardened in its belief of the futility of applying natural knowledge to the culture of the earth; and learning and acquirements blush to be outdone by plodding industry, under the influence of antiquated habits and practices, irreconcileable to any sound theory. But let not men who think for themselves, and who employ science to purposes useful to the community, be discouraged by partial failures: the union of knowledge and practice must ultimately prevail over chance, however lucky, and prejudices, however inveterate.

"Experiments correctly made," says Dr. A. Hunter, in his Georgical Essays, "constitute the basis on which agriculture should be raised; but these experiments should rather be the effect of reason than of chance. To plan an experiment well, to trace it minutely through its progress, and to draw a just conclusion, requires a perfect knowledge of the history of nature and of art. From a defect in these particulars, we often become hasty in our praise, as well as indiscreet in our censure." These remarks require no illustration: they coincide with every principle of reason and of judgment.

CHAPTER XVIII.

MISCELLANEOUS OBSERVATIONS.

SECT. I.—AGRICULTURAL SOCIETIES.

AN Agricultural Society was established in this county in 1794, on a scale so extensive, and for purposes so multifarious, that if its objects could have been accomplished, a parochial report of Berkshire would have long since been in its archives, from which the most valuable and minute information might have been obtained. Unfortunately the wheels of the machine were too numerous and complicated, to act by voluntary motion. Sub-committees were appointed in eight different districts, consisting of the chief proprietors and practical farmers in each, with their separate local clerks; and queries were circulated, and premiums proposed with judgment and discrimination, but without producing the intended effect. Subscribers were to pay a guinea or half a guinea annually; and a general committee, consisting of the most intelligent and respectable gentlemen, selected from the sub-committees, was to carry on the correspondence, and to convene the subscribers when they judged it expedient.

To the numerous printed queries which were dispersed relative to the soil, culture, stock, &c. of parishes, the writer of this, who acknowledges the obliging communication of William Budd, Esq. clerk to the

the general committee, and still the active and zealous secretary to the remodelled society, has seen only one Return which could be deemed complete and satisfactory;* and though some valuable remarks were made by the sub-committees on the Agricultural Report by Mr. Pearce, of which I have availed myself, this part of the plan was abandoned of necessity, and the other objects of the institution which were to circulate agricultural information, to encourage exertion in the farmers, and to reward honest industry in the labourers, though not wholly neglected,—from a variety of impediments, were but languidly conducted, and the Society was in a manner dissolved.†

At length, in 1800, many gentlemen who had belonged to the original institution, and others who felt the propriety of supporting such an useful establishment, and who were animated, by royal example, to give a new stimulus to agricultural pursuits, agreed to subscribe in the same proportions as before, to simplify the mode of conducting business by having only one committee and one clerk; and besides diffusing information on rural affairs from every accessible source, to offer premiums in money or plate, adapted to their funds, for the following objects:

PLOWING.

1. To the owner of the plough that performs best.
2. To the second best.
3. To the plowman of the first.

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* It is by Frederick Page, Esq. of Newbury, and deserves to be preserved.

† The scheme did not take, because it was supposed to have been made a party business for electioneering purposes.

 4. To

4. To the plowman of the second.

5. To the maker of the best plough.

To be ascertained by trial, and decided by competent judges.

LABOURERS AND SERVANTS.

1. To the cottager who has reared the largest family by his daily labour, without the assistance of parish relief.

2. To the man servant in husbandry who has lived the greatest number of years in the same place, with a good character from his master or mistress, and the clergyman of the parish.

3. To the maid servant who has lived the greatest number of years in the same place, with a good character from her master or mistress, and the clergyman of the parish.

4. To the plowman who has plowed the greatest number of acres with two horses only, and without a driver.

5. To the best sheep shearer.

ENCOURAGEMENT OF STOCK.

1. To the person who shall produce the best bull, bred or used during the whole of the spring of 1801, in the county of Berks, for the purpose of improving stock.

2. To the person who shall produce the best and most profitable milch cow, bred or used for the last twelve months in this county.

3. To each of the persons who shall produce the best shearling ram, bred in the county of Berks, of the following sorts: Berks, Wilts, Cotswolds, Leicester, or South down.

4. To

4. To the best of those sorts, which is to be determined by the committee.

5. To the person who shall produce the best boar, bred in the county of Berks.

6. To the person who shall describe at large, in an Essay, (which shall be deemed by the committee as satisfactory, and proper to be published by the society) those kinds of cows, sheep, and pigs most advantageous to the general stock, on large, middling, and small farms; and particularly such as are best suited to the soil and climate of this county.

7. To the person or persons who, in the year 1800, or 1801, shall ascertain by experiment, to the satisfaction of the committee, which of the undermentioned breeds of sheep are most valuable for the general stock of the county, or whether a mixture of breeds should claim a preference, viz. the Berks, Wilts, Cotswold, Leicester, or South down.

8. To the most numerous Friendly Society established on principles, the outlines of which will be published by the committee.

This detail of objects for which the Society were to adjudge premiums, will shew the plan of the institution, and the patriotic spirit which actuated it. With slight variations, and some occasional interruptions, the Society proceeded with the same views, till the 30th of September, 1807, when a meeting of the subscribers having been convened at Ilsley, by the acting stewards of the Society, William Hallet and John Stevens, Esquires, and a very respectable number of gentlemen attending, it appeared the unanimous wish of the subscribers to put their establishment in full activity, and to render it as far as possible productive of public and private advantage to Berkshire. Experience had taught

taught them to overcome some difficulties, almost inherent in the nature of such institutions; and an intimate acquaintance with the character of the Berkshire farmer enabled them to propose premiums at once honourable to his feelings, and unexpensive in themselves.

To effectuate this last mentioned object, it was resolved to have a medal struck, with an appropriate inscription, as a reward for him who should merit distinction by successful improvements in farming or breeding of stock, and to confine the prizes in money to labourers and servants, to whom alone they were likely to be an object. It was found too, that the appointment of gentlemen in different parts of the county to collect the subscriptions in the neighbouring districts, would obviate the inconvenience of making small remittances, and facilitate the payment both of subscriptions and premiums; while it was likely to increase the former, and thus eventually add to the number of the latter. In a county where public spirit is the reigning principle, it was no difficult matter to find gentlemen ready to undertake this trouble, and the happiest results may be expected from their zeal and patriotism. A Board of Agriculture, under the patronage of Government, may be considered as an university, from which the higher principles and precepts of rural œconomy are to emanate; but without provincial Agricultural Societies to promulgate its decisions, and to carry its recommendations into effect, knowledge can never descend to the multitude: and those who want instruction most, will be in danger of remaining in ignorance. It is therefore with the fullest conviction of my reason and judgment, that I wish to impress on the minds of the Berkshire gentry and yeomanry, the services which they may render to the community and to themselves,

themselves, by persevering in the support and extension of their Agricultural Society. I know the practical talents and attention of the stewards* for the present year too well to suppose the business will be suffered to flag in their hands; and I have no doubt when they resign their charge, it will be delegated to men in succession, who will feel a pride and a pleasure in promoting the objects of the institution.

I should not, however, forget to mention that at the last meeting to which I have referred, it was agreed on to establish and support, by every means in the power of the subscribers present, a wool fair, or fairs,† to be held annually, at some convenient place, a measure so necessary, in a county producing so many sheep, that it seems matter of astonishment this convenience, both to the breeder and the wool-stapler, should have been so long neglected. Every article of produce and consumption should be brought to a public market: the farmers are too numerous a body to enter into any extensive combination to enhance the price of their commodities; and if the wool-staplers, from the privacy of their dealings, have lain under an unjust imputation of acting in confederacy, their character will most effectually be cleared, by openly coming forward, and buying at public marts.

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* Sir John Throckmorton, Bart. of Buckland, and Francis Justice, Esq. of Sutton Courtney.

† These fairs have since been fixed at Newbury and Wantage. See Chap. XV.

SECT. II.—WEIGHTS AND MEASURES.

Notwithstanding the fines and forfeitures attached to selling corn by any other than the standard bushel, and the obvious ill consequences resulting from the practice, without one counterbalancing advantage, Berkshire, like most other counties, has its diversity of measures, which only encourage jobbers, to the prejudice of the grower of corn; who, influenced by habit, does not always take into consideration, that if he sells nine gallons instead of eight to the bushel, he is giving a bushel in every quarter of grain more than the laws allow or justice requires, and that the dealer is probably making that proportion of profit, out of his ignorance or obstinacy.

The proprietors of land, therefore, cannot more effectually serve their tenants than by exerting themselves to introduce an uniformity of measure in their respective neighbourhoods. I am aware of the effects of prejudices long established, and of that combination which at first is formed among jobbers, to prevent the use of the standard bushel, where a larger has been customary. In a neighbouring county, a magistrate who occupied one of his own farms, was determined to sell by the Winchester measure, where the contrary had been the practice. He accordingly sent his bailiff to market, who, when he explained his master's orders, could scarcely get a bidding, and for some time went by the name of Mr. *Little Bushel;* till his employer, finding it vain to persevere without support, and unwilling to enforce, returned to the usual measure of the neighbourhood. This example, however, should not deter. If an adequate number of legal bushels were provided at the

the county expence, and the magistrates were to publish their resolution to put the act of parliament in force, and offer an exchange for the customary bushels, which should be destroyed, the jobbers would soon lose that hold, which they have an interest in keeping, on the prejudices of the farmers.*

It is chiefly in the Vale, however, that nine gallons are allowed to the bushel, and it is there that prejudices in favor of established habits of every kind, are the strongest. The further men are removed from an intercourse with the world, by means of populous towns or very public roads, the more slowly improvements are adopted, and the more apt they are to ridicule the most beneficial practices, and to class them among the chimeras of speculating brains. Our virtues and our vices generally arise from society; and the further we are removed from its influence, the more steady and uniform our course, whether right or wrong.

A few enlightened improvers in the Vale, such as Mr. Loveden, and Sir J. Throckmorton, are more likely to overcome agricultural, and other prejudices, from the effect of good example, than could be ac-

* I think it was observed, on a former occasion, by Charles Dundas, Esq. M. P. for this county, that the standard measure in the exchequer does not agree with the requisition of the 13 William III. c. 5. By that statute, the bushel is ordered to be 18½ inches wide, and 8 inches deep. It would consequently contain 2150 cubic inches, while that in the exchequer contains only 2124 cubic inches. If this difference exists, it should be rectified by legislative interference; and I know no gentleman more proper to attend to this business than the senator who I believe made the above observation.

After all, *measure* is fallacious, and *weight* is the most certain criterion of value. If the legislature, therefore, should in its wisdom take cognizance of the manner in which corn is sold, I would humbly propose that *weight* rather than *measure* should be the standard.

complished

complished by all the arguments which literature can adduce against their pernicious tendency.

At Faringdon the nine-gallon bushel is almost exclusively used.

At Wantage, the same.

At Abingdon, both the nine-gallon and Winchester bushel are employed.

The former is the custom of the market, unless the contrary is specified; but malt sold out of the town is only eight gallons measure.

At Hungerford, Ilsley, Lambourn, Newbury, Maidenhead, Oakingham, Reading, Wallingford, and Windsor, the standard bushel only is used, in buying and selling corn. Hence it is apparent, that it is in the Vale alone where the reform I have been recommending is wanted.

Corn is commonly sold by the load, of five quarters.

In building, hedging, and ditching, the perch, or pole, of eighteen feet is the usual measure. In nicer operations, the statute pole of sixteen feet and a half is employed.

Wood is sold by the foot and load; underwood by the cord, in some places absurdly called a load, and by the proper load.

The statute acre is generally used in computations for rent, tithe, and produce; but there are also common field acres, which are sometimes more and sometimes less than the statute.

Sea coal, as it is called, is sold by the chaldron, pit coal by the hundred and ton.

In weights there is now avowed diversity; and in some of the corporate towns I had the pleasure to find, on enquiry, that the magistrates were vigilant in detecting false weights, and measures of liquids. It is to be

be feared, however, that in village shops and public houses, the poor have not always justice done them in quantity or in quality. I merely throw this out as a hint to the magistracy. Where inquest has been taken in other counties, many frauds of this kind have been discovered.

SECT. III.—SUPPLY OF LONDON.

A county, locally situated as Berkshire is, and possessing the advantage of a navigable river to London, must naturally be supposed to derive many benefits from these circumstances. In fact, it is to the facility of communication with the metropolis, and the certainty of obtaining a good price for every article of stock or produce, that the great progress it has made in agricultural improvement is chiefly to be ascribed.

Not only cattle, sheep, lambs, butter, cheese, corn, malt, flour, and fruit, are prepared for the London market, but meat of different kinds, particularly veal, is sent hither by waggons. I do not understand, however, that the practice of sending meat is always attended with a superior profit; but it no doubt tends to keep up the price of this commodity in the neighbourhood, by lessening the supply, and thus eventually benefits the farmer and the butcher.

Under the sections NAVIGATION and COMMERCE, it will be seen more particularly what articles of internal produce or manufacture are sent to London, either by water or land carriage.

Were the Thames navigation improved to the utmost, it is probable that many commodities which are now forwarded by waggons, would be sent by water, particularly fat cattle, which must receive essential injury,

jury, from being driven so far, and from being so long on the road. If I mistake not, a boat* *is fitted up on the* Grand Junction Canal for the conveyance of beasts; and in a more perfect state of the Thames navigation, it would be no bad speculation to establish a barge for the same purpose. It is a fact deserving notice, and confirms my observation, that fat cattle from Herefordshire are met by the London salesmen at the Red Lion, Buscot, almost the remotest point of the county, and *driven to town*; † whereas, if they could be conveyed by water from the wharf at that place, in an equal space of time, it would probably be not more expensive, and certainly injure them less.

That the value of land is enhanced by its vicinity to a navigation, is a position now seldom disputed. It not only lessens the expence of draught, but affords facilities for bringing manure from distant parts, and thus increases the produce, and meliorates the soil. Yet it is to be lamented, that a narrow and a mistaken policy still partially operates against canals, or new cuts, which has been the means of preventing some valuable improvements to particular estates, as well as the public advantage that would result from their adoption. Rich as this county is in its navigations, several cuts along the course of the Thames, in order to lessen the distance, and to get rid of obstacles, have hitherto been resisted; though in the opinion of the best judges they would be productive of the best consequences.

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* "I had a plan of a barge for such purpose made many years back, and it would have been in use, had the improvements been made in the Thames navigation as intended."—*Mr. Loveden.*

† The salesman charges 13*s.* 6*d.* each beast for selling and driving, and for sheep 1*s.* 6*d.* and 1*s.* on each sale for security money, which is the driver's perquisite. The cattle in summer go over the downs to Reading, &c. In winter through Abingdon.

CON-

CONCLUSION.

MEANS OF IMPROVEMENT, AND THE MEASURES CALCULATED FOR THAT PURPOSE.

HAVING in the course of this work, which has occupied a considerable portion of time and attention, freely and candidly expressed my sentiments on every subject more immediately connected with the agricultural improvement of a favorite county, I beg leave to conclude with the following observations by Mr. Page, on the best means of perfecting the navigation of the Thames, so intimately connected with the welfare of Berkshire in particular, and with the general interests of a great *part of* the kingdom.

"The system of improvement by pond-locks as practised on the Thames, is certainly not so complete and effectual as that on the Kennet. The pond-locks on the Thames having been generally erected only by the sides of the old mill-dams and weirs, the pen does not benefit the whole extent of the river up to the tail of the pond-locks above. In the upper part of the Thames, particularly between Lechlade and Wallingford, much remains to be done. It is yet in an imperfect state, and requires various improvements, by balasting, &c. to give it all the advantages of which it is susceptible. In some instances, perhaps, the circuity might be reduced by cuts, made in a more direct line from one part of the river to the other; but this should be done with the utmost caution; for it would be the highest injustice

injustice to desert, for any considerable distance, the original navigable channel of the river; as upon the faith of maintaining the navigation in, or nearly in, its present channel, towns, mills, manufactories, &c. have been established, improved, and augmented. It is also on these establishments that the artificial navigation depends for its revenue and support.

"Between Wallingford and Windsor, the natural depth of the navigable channel of the river is greater than that of the Kennet, or of any canal or river communicating with it; and the inconvenience sustained by the want of water, subsequent to that part of the summer in which the weeds, that form a sort of natural pen, are decayed, is but trifling; and a very small quantity of additional water drawn from one mill-head will float the barge to the lock below it.

"But there being no pen-lock, or staunch, between Windsor and the tide-way, a distance of 29 miles, in short water times, which generally last from the beginning of July to the middle or end of November, it is necessary, in order to obtain a navigable depth, even of three feet, to suffer the whole of the water penned by the several locks between Windsor and Reading to run for twelve or fourteen hours, for two days in the week; viz. Thursdays and Sundays; and this at the time of the year when it is most wanted, and ought to be husbanded with the greatest care, both for the mills and the navigation.

"This 'fresh,' or 'flash,' generally, but not always, enables the barges passing downwards to get into the tide-way, but very seldom allows the barges passing upwards to reach the first staunch, or pen, at Windsor, and therefore two or three freshes, or flashes, are necessary; so that during the intervals of them, the barge lies

lies still, the bargemen are idle, or mischievous, through want of employment, the owner is delayed in his freight, and the freighter in his goods.

"The whole of this part of the river, except the first eight miles between Windsor and Staines stone, is by statute 14 Geo. III. c. 91. placed under the jurisdiction of the corporation of the city of London; and for navigating the whole district, 4*d.* per ton per voyage is payable, by statute 17 Geo. III. c. 18."

The difficulties and inconveniencies attendant on this part of the navigation have been long felt and acknowledged, and various plans have been suggested to avoid them. Two applications have been made to parliament for acts to form canals to leave the Thames at or near Windsor, and to fall into the tide-way near Isleworth. The first of these plans would have reduced the total distance between Reading and London (now, by the circuitous course of the Thames, 77 miles) to 49 miles; and the latter to 62 miles. A third plan, more eligible than either of the preceding, which, by making a canal only 11 miles in length, and on one level, from a little above Maidenhead, to join the Grand Junction Canal near Cowley, would reduce the total distance from Reading to London-bridge to 59½ miles, and to Paddington-wharf to 53½ miles, has been suggested; and from the facility of its execution, and various other advantages connected with it, will no doubt at some future period be adopted.

As this canal, if executed, would in the most effectual manner realize the idea expressed in the works of an agricultural writer of eminence, when treating on this very district, I shall use his words.*

* Marshall's Southern Counties. Vol. I. p. 11.

It

It appears to me in a very strong and impressive light, that an improvement of immense magnitude remains to be effected, by an increase of water carriage through these vale lands. A navigable canal, of suitable dimensions, leading through the extensive level on the north side of the river, nearly in a straight line between Westminster and Windsor, would not only shorten the distance, but would cut off an incalculable expenditure of animal labour now incurred, in conveying the various articles of farm produce, and other heavy lading, as well as passengers, to and from the metropolis. The facility with which it might be formed is evident, in the natural flatness of the country.*

Yet the execution of a canal of this kind, and in this direction, ought not to preclude the improvement of the lower part of the Thames by means of pond-locks, situated upon side cuts, with weirs to retain the water to a navigable depth in summer, and which might be opened in the winter, or in times of flood, for the passage of the whole volume in the river.

Impressed with the conviction of this being the only proper mode of improvement, it is my wish to obviate the two leading objections that have been made to it, and which are,

First, That weirs, pens, or staunches, in the bed of the river, would occasion and increase floods; and

Secondly, That the additional tonnage necessary to defray the expence of the erection of the weirs and pond-locks, would enhance the freight of goods.

To the first objection may be opposed facts, in situations where this improvement has been tried; the whole of the Kennet, and those parts of the Thames

* Marshall's Southern Counties. Vol. I. p. 11.

where

where the open weirs, and pond-locks exist, are certainly not so subject to a continuation of floods as the lower district. The mode adopted by the corporation of London, by suffering shoals to accumulate, and by erecting contractions and under water weirs, shew the necessity of some expedient to retain the water; but unfortunately, as these are not removable in winter, the bed of the river is raised above its proper level, and the superabundance of flood water is thrown over the adjacent country.

The navigation and drainage of the river in the same channel, can be reconciled only by open weirs. The prejudice which exists against the erection of weirs is solely a remnant of that salutary one, in the first instance, which obtained several parliamentary sanctions, and has been carried so far, that for a long time a prohibition existed, to prevent the erection of weirs any where below Windsor. And when, in 1795, upon the failure of every other expedient, the commissioners of the upper district had projected the plan of open weir and pond-locks, to remove the inconvenience of a long shoal below Windsor-bridge, and applied to parliament for powers to that effect, it was not without some difficulty that they were obtained; but the opinion of Mr. Chapman, which decided on their expediency, has been confirmed by ten years practical experience of their utility.

This last recited instance, together with a similar one in the erection of a pond-lock, near Blake's old lock, immediately below Reading, present also a sufficient answer to the second objection. The expences attendant on the delays, by enhancing the consumption of provisions, &c. are diminished in a much greater

ratio than they are increased by the additional tolls, which together amount to 6*d.* per ton.

On the substitution of pond-locks to the old locks, in 1772, although a very considerable addition was made to the tolls, yet owing to the saving made by the barge masters in every other kind of expence, an immediate reduction took place in the price of freight.

One part of this argument is capable of being reduced to a demonstration, by a calculation on one leading article of expence attendant on the navigation, namely, that of the horses which haul the barge upwards against the stream. The total amount of the bills paid to the barge carters for drawing a barge of 128 tons, from the tide-way to Newbury, upwards, amounted February 1807, to 34*l.* 19*s.* payable in the following proportions.

First on the Thames, from the tide-way to Windsor, being that part of the river where no pond-locks are erected:

Distance 29 miles, 18*l.* 15*s.* Per mile 12*s.* 11*d.*

Secondly, from Windsor to Reading, being the district where pond-locks have been erected:

Distance 31 miles, 9*l.* 14*s.* Per mile 6*s.* 3*d.*

Thirdly, upon the river Kennet, from Reading to Newbury:

Distance 18¼ miles, 3*l.* 5*s.* Per mile 3*s.* 6*d.*

Now if pond-locks should be erected in the first or lower district, there is fair reason to conclude that the expence of hauling by horses would not exceed, per mile, the rate of the second district, and consequently the saving of expence in a barge of that size would amount to 9*l.* 11*s.* 9*d.* or nearly 1*s.* 6*d.* per ton.

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The same argument, although it cannot be reduced to calculation, applies to every other article of expence incurred in the voyage.

It applies to the cordage; because where the towing is most difficult, there is the greatest stress; and to give the public an idea of the expence of this article, it is only necessary to observe, that a line of 220 yards long, weighing from 6 cwt. to 7 cwt. is frequently rendered useless in three voyages.

It applies to the wear and tear of the barge itself, which, in the lower district, is not unfrequently drawn for two or three hundred yards together on the gravelly bed of the river.

It applies to the wages of the men and to their maintenance; for their skill and activity must be paid for, even when they are not exerted, which in the intervals between the days of the "freshes" they cannot be.

It applies likewise to the capital employed by the barge-master, who, if he could make his voyage with greater expedition and certainty, would be content with a less profit on each of them, and consequently be enabled to reduce the price of freight.

To conclude with what is more material to the public interest, the erection of pond-locks in this district would cause such a dispatch in the conveyance of goods carried by water, that the quantity of those goods would greatly increase; and thus the tolls payable on the navigation would sooner experience a diminution on the principle already explained.

Upon an actual survey, it certainly does not seem necessary to erect, at present, more than three pond-locks, nor to exact a toll at each of them of more than one penny per ton: a sum too trifling to mention, in

comparison with the evils at present attendant on the navigation in this district, which are an immense waste of human and animal labour, a destruction of cordage, an article, for the supply of which this country depends principally on foreign nations, the profanation of the Sabbath, the barges in summer being obliged to navigate on that day; and lastly, the general delay and hindrance of trade.

Although the constitution of the upper districts of the Thames, is like all human institutions, subject to imperfections, yet there has always existed a salient principle of improvement, which has been frequently roused into action by the commissioners, for the advantage and accommodation of the public.

If their powers have been limited, they have applied to parliament for an extension of them, which has been granted, at a time when speculative plans, projected in opposition to the real interests of the river, have been rejected.*

It cannot, therefore, be deemed improper to express a hope, that modes of improvement, practically useful, adopted by the commissioners of the upper district,

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* On this I beg leave to remark, that from the circuitous course of rivers, they will always present impediments to navigation. A voyage in a barge is not an excursion of pleasure, where the meanders of the stream, and the verdure of the meadow, are to delight the eye: the carrier of goods wishes to go the nearest way to his port, and the straighter a navigation can be carried, the better. Towns, however, situated on natural streams, ought not to be deserted, nor did it ever enter into the contemplation of any speculator to deprive them of a water communication, which they might always more advantageously enjoy, by means of lateral cuts from the main line of navigation.

will

will be followed by the corporation of London; and that the least improved part of one of the finest rivers in England will not continue to be that which is nearest the capital, and under the immediate management of those to whose care are entrusted the interests of the greatest commercial city in the world.

APPENDIX.

APPENDIX. No. I.

The subsequent valuable Observations, by DR. BEEKE, *Rector of Ufton, &c. arrived after the preceding Report was sent to Press, or they would have been incorporated in their proper Places.*

CHAP. I.—I refer to what I have said in Lysons' Britannia, adding the following corrections:

To the distribution of the land, in page 188 of that work, 30,000 acres of coppice, and other woodlands, should have been added, which will increase the total number to the same amount as in page 187. But the calculation was made several years ago, and many inclosures have since taken place, by which a considerable part of the chalky sheep-walks has been converted, or is now converting, to arable; and also a good deal of heath has been inclosed, and some of it planted for woodland. With these variations allowed for, (which may be done by referring to the respective inclosures) the account I have given will be found sufficiently correct.

CHAP. II.—Estates have recently very much increased in value in this county. I think the average difference of rent on estates newly let, when compared with what they let for twenty years ago, is at least 70 per cent.; and any tolerable well-conditioned estates will

will find ready purchasers at twenty-seven or twenty-eight years value of an *extended clear* annual rent.

When compared with its intrinsic value, according to the quality of the soil, meadow land appears to me to let much lower than the general average of the kingdom. The unwatered meadows are in general badly managed, very frequently mowed, and rarely manured or fed. Their average rent does not much exceed two guineas per acre. But it also appears to me that even meadows very skilfully floated, and with an ample command of water, let below an average value, being seldom let for more than from 2*l.* 10*s.* to 3*l.* unless peculiarly circumstanced. The cause is, that in general the Berkshire farmers have little skill as graziers, in the management, or in the buying and selling cattle, and bestowing all their manure on their arable lands, they have so exhausted their meadows by frequent mowing, that few of them are in a condition to produce what they ought to do.

CHAP. III—In many parishes of Berkshire a great inconvenience begins to be felt from a want of habitations for the labouring poor; and is in some degree a consequence of the modern system of connecting, with the consolidation of farms, an improvident parsimony with respect to the houses which previously existed on them. Leases for lives, or any other tenure which secures to the labouring classes a possession of their cottages (and the small closes formerly so generally connected with them), for a term which can induce them to take care of them, and keep them in repair, seem to be the only way of preventing that general dilapidation of them which begins to be apparent in many parts of the kingdom. When cottages are let to farmers for the

the use of workmen, whom by that means they can more effectually command, their repairs are too often neglected till they become ruinous; when let at rack-rent to the labouring poor, by any considerable land-owners, the rents are in general so badly paid, and their amount is so insignificant, that there is often an almost irresistible temptation to pull them down rather than repair them, and supply their destruction by *dividing* those which remain; so that daily the habitations of the peasantry are becoming more contracted in extent, and visibly on the whole more ruinous than formerly. If we calculate the increase of paupers, by the too general abolition of lifehold cottage tenures, and comparatively greater neglect of rented cottages by their occupiers, and greater cost of repairs when done by the landlord than by the poor life-tenant, I have no doubt but that a *material loss* is sustained by this change of system. The *common-field land* which such cottagers formerly held, was seldom of much use to them; but it seldom happens that the consolidations of the small closes, which they occupied, with the greater farms is attended with advantages which compensate the more remote, perhaps, but ultimately inevitable loss, that results from the causes which I have described. I think, indeed, that there are few parishes held almost entirely by one proprietor, where the estates would not in a few years derive *a material benefit* by *giving* away the cottages, and small portions of land near them, to the more industrious labourers, for the lives of husband, wife, and one child, but without any power of *assigning the occupation or the rent* to any other person.

CHAP. IV.—The farmers in this neighbourhood are in general active, and with considerable skill in all that concerns

concerns the management of arable lands. The tithes are usually compounded for, and I think the average rate of composition is equal to about four shillings per pound of the landlord's rent, for all tithes collectively. Leases are very general, indeed almost universal, and chiefly for seven or fourteen years.

CHAP. V.—Chaff-cutting and winnowing machines are very generally used. Threshing machines are of recent introduction, but seem to be very rapidly increasing. Those which have been most approved of are of a construction very common in Devonshire, require four horses, cost forty guineas, exclusive of the expence of erecting them, and clear barley better than most of those which have been made. On a farm near me, twenty-five quarters of wheat have been cleared from the straw in one day, by changing horses and working extra hours; but on an average twelve quarters may be well cleared from the straw in the usual working hours.

A machine with five or more, commonly nine teeth, called a nine-share plough, is in very general use, in this district, to clean land, or sow the spring corn. It has the advantage of raising the weeds and roots to the surface much more than a plough or a drag, so that it is less torn, and can be more easily laid hold of by the harrows. Four horses will work about six acres per day.

CHAP. VI.—The recent inclosures in Berkshire have been of the common-field land; of the chalky sheep-walks; and of flinty heath.

The chalky sheep-walks, or down-land, of this county are for the greater part of very good quality, and

and well adapted to turnip husbandry, and to saintfoin: a considerable extent of them has lately been cultivated, and, I understand, with great profit, especially in the very extensive parish of Lambourn, in which, a few years ago, they contained many thousand acres.

The flinty heath-land is much of it remarkably barren; but with a few exceptions of small spots of a hazel loam that are of good quality. The expence of improving these heaths, unless where the larger species of furze grows naturally on them, will rarely be indemnified, unless deriving peculiar advantages from situation. Their only profitable improvement, when inclosed, is by planting them for timber, with larch or Scotch pine, or for coppice, with birch, either of which, with due care, will give an ample recompence. Near two thousand acres of these heaths have recently been inclosed in this neighbourhood, and about the same quantity will probably be added in a short time, and the greater part will be planted for timber or coppice. Wherever this has already been done with due care, the promise is good.

In the parish of Wasing more than one hundred acres were planted about forty years ago: a part with birch, which is regularly cut when nine years old, and usually sells for sixteen to eighteen guineas per acre while standing; and this on a soil consisting almost entirely of flints and silicious sand, with a small mixture of decayed heath.

CHAP. VII.—Land is very rarely summer-fallowed for corn in Berkshire, and the substitution of preparatory green fallows, as they are called, is almost universal, after the land has been cleaned as much as possible by

by frequent plowings, &c. in the early part of the summer. Some very good farmers occasionally have *two sowings in succession* of sheep-food, turnips, vetches, &c. which is done with great advantage to the subsequent crops of corn: the ground is made exceedingly clean, and is fertilized without any great expence of manure.

CHAP. VIII.—On dry gravel it is found more advantageous in general to sow a mixture of white clover, trefoil, ray, and rib plantain than broad clover, and to suffer such lands to remain two years unplowed; thus adopting a five years instead of a four years course of grass, wheat, turnips, and barley or oats.

Saintfoin is cultivated with advantage on the same poor flinty gravel, though not with so much profit as on lands with a sub-soil of chalk; seldom lasting more than seven or eight years.

Lucerne has not been much tried, and where tried has not been successful.

It is found, by repeated and uncontradicted experience, that to mow clover twice in the year for hay is more beneficial to the future crop of wheat than to feed it off in the best manner. In imitation of this well-known circumstance in Berkshire, a friend of mine has recently adopted the same practice in Devonshire; with a view to ascertain its comparative effects, feeding parts, and mowing twice, *for hay*, other parts of the same fields, and making no other difference. The result has been decidedly in favour of mowing for hay.

Much remains to be done in the part of theoretical agriculture which relates to ameliorating crops, and in what succession one order of plants in a botanical arrangement

rangement of them seems to prepare the land for another order of them.

It may be that land is not only prepared to produce a particular order of plants more plentifully by *adding* what may be favorable to their growth, as manure of dung, &c. or by neutralizing noxious qualities, as by lime and exposure to the atmosphere, but also perhaps by *exhausting it* of something which, while existing too abundantly, may render it less fit for the intended produce.

Thus, as far as my observations have gone, when land long in tillage is laid down to become permanent meadow, there is on them a perceptible progress, in which different plants are successively more abundant till supplanted by others, and until at length a sort of adjustment takes place of the different kinds adapted to the peculiar soil and situation in a mingled proportion.

But in this manner I believe it is that on newly cultivated land, full of decayed vegetable mould in an acid state, potatoes are evidently an *ameliorating* crop; while on long cultivated lands, where the vegetable mould is in small quantity, they as certainly are a very exhausting crop.

And as to the particular circumstance which introduced these remarks, it seems to me that the plants of *diadelphous class*, in the Linnean system of botany, have all of them, as far as they have been tried, the effect of rendering the land more fit for the future production of the *gramina;* more fit in proportion as they have themselves been long cultivated on it, or more luxuriant.

Thus a heavy crop of beans gives a better chance for a good crop of wheat after it than one of inferior luxu-

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riance. Thus an old saintfoin ley, though annually mowed, and little, if at all manured, leaves the land in good condition for grain, and probably the crops of grain which succeed to it would be better if it were plowed up while yet productive, and before the various kinds of creeping *gramina* (couch grasses) have participated of its ameliorating quality.

It is well known that the same is true of *Lucerne*, in France and Spain, where, after having been mowed three or more times during fifteen or twenty years, it is often succeeded by three or four crops of grain in succession.

And upon the same principle it is that *clover*, when twice mowed for hay, evidently improves the land for *grain*.

CHAP. X.—The coppices in this part of Berkshire are, from situation, and the advantage of carriage by water to London, of considerable though very unequal value, because unequally attended to. No part of the produce of land rewards more amply the care of the proprietor, and a moderate expence in filling up vacancies with the species of wood best adapted to the situation. A small coppice in a wet valley near me was cut at *nine* years growth in 1799, the extent less than an acre; it was then drained where very wet, and filled up with willow-sets, at an expence of between three and four pounds, and, in 1806, *seven* years after, was again felled: before, at *nine* years growth, I am informed it sold for twelve guineas, and in the second case, at seven years only, it sold for twenty-six guineas, and is becoming still more valuable.

Coppices are usually cut when nine years old, and sell at from ten to twenty-five pound per acre according

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ing to their state. Some variation, but of no great importance, results from the demand for hoops in London. The average price is, I believe, between twelve and eighteen pound per acre. I have never heard that the tithe has been demanded in kind; and the purchasers cut according to their own convenience, and manufacture the greater part into hoops and hurdles on the spot, applying the wood to its different uses as they proceed, and being guided by the comparative demand for hoops or other articles. The usual division is into rafter poles; hop poles; hoops of various lengths, made on the spot, and sent *unbent* by water to London; hurdles and stakes; staves for turners of mops and broom-handles; birch for brooms; faggots for families; bavins for brick kilns; thorns for hedging, &c. &c. all separated and adapted in the coppices, the labour being paid for by task work, according to the articles fabricated or prepared. The advantage of a ready sale for so divided a produce enables the purchasers of the coppices to give a greater price for them, than could be obtained for a similar growth, in many parts of the kingdom.

CHAP. XII.—*Draining* is very well understood in Berkshire, is executed at a cheap rate, and to a great extent on the arable lands, in the districts of clay mingled with strata of gravel especially.

I may here observe with respect to draining, that the same system is by no means adapted to different districts of the kingdom, and that it is seldom either successfully or cheaply performed without *local* experience, and knowledge of the *different* manner in which the surface water, or the springs below, force their passage through strata of different kinds.

CHAP.

CHAP. XIII.—The peculiar breed of sheep in the Vale of Berkshire, and the adjacent parts of Oxfordshire, should be noticed. It has a very long visage, a remarkably dull physiognomy, and seems not unfit to fold on strong and deep lands, but on the whole does not appear to me to be valuable. Its wool is coarse, and not abundant, and its shape cannot be recommended.

The *Berkshire hog*, taking all circumstances together, is probably best adapted to the *farmer's use* of any breed, though less fit for the cottager or for gentlemen than the China or the Suffolk. The breed is of good shape, hardy, and prolific, but I believe more valuable for bacon than for pork.

CHAP. XV.—On a careful examination of the questions respecting inclosures, I have found that much of the diversity of opinion respecting them arises from viewing their effects in different districts, and forming the judgment without a general attention to them.

Hitherto, for obvious reasons, the object of inclosures has rather been the dividing common fields and meadows, than the improvement of wastes. The inclosure of the two former in fertile and low-land districts, has an obvious tendency to diminish the *extent* of the cultivation of grain, although it may not diminish in any similar proportion the quantity produced, because a better system will compensate the diminution of extent by great abundance on the land sown with grain.

In the rich and fertile low-lands, when common fields are inclosed, much of them is laid down for grass, the quantity of labour, and consequently the numbers of the agricultural population are diminished. But in common fields of a quality to admit of turnip husbandry,

bandry, no very material difference is made in the necessary demand for labour, but only the opportunity for a more perfect cultivation increases the inducement to good husbandry, and in that way increases the quantity of employment.

With respect to wastes inclosed for cultivation, the cost is so great, if buildings are wanted in addition to fences, and to the fitting the surface for tillage, that the prudence of employing capital in such speculations must depend on the contemporary value of money, the nature of the soil, and local circumstances.

In general, the cost of the improvement of wastes is rather in proportion to their *number* of acres than their future annual value. Where *every thing* must be done, if we include the loss of interest, during the period which elapses before the land is productive, I do not think that fertile wastes can be brought into similar cultivation with old inclosures of similar quality, at less average cost than ten pounds, or barren lands twelve to fourteen pounds per acre, the loss of interest being so much greater in the latter than in the former case, because it is so much longer before they become productive. Doubtless these remarks may not be true in all cases, but in general they are founded on experience.

Whether, therefore, we look to the inclosure of wastes for *tillage or pasture*, as a question of national or individual profit, the disproportion resulting from the quality of land will be very great; but yet not so great as may at first appear, because that which is most valuable after being improved, has very often been more valuable in an equal degree before its improvement, as cow-lees, &c. Still, however, on the whole it may be doubted, whether any real public or private benefit results from the cultivation of wastes, which, when improved,

proved, are not worth more than from ten to twelve shillings per acre, annual rent. The proper, and by far the most profitable employment of all such land, is *planting* for coppice or timber.

On a comparison of the Oxford and Windsor prices of corn, during the seventeenth and eighteenth centuries, I have found (as might be expected), that so long as we were an *exporting* country of grain, it was dearer in Windsor; and since we have been an *importing* country, it has been dearer in Oxford. The average difference, in both instances, is almost threepence a bushel for wheat.

APPENDIX. No. II.

TABLE I.—Containing the names of the Towns situated on the Banks of the Thames, with their Distances from each other, and from London Bridge; the number and names of the old Locks, Staunches, and Weirs; and of the Pond-Locks, distinguishing their respective Dimensions, and the Materials of which they are constructed.

Towns.	Distances from each other.	Distances from London Bridge.	Old Locks, Staunches, and Weirs.	Pond-Locks.	Dimensions	Materials.
Richmond		16 2 4				
Kingston	4 2 6	20 5 0				
Hampton Court	2 7 1	23 4 1				
Weybridge	6 7 6	30 3 7				
Chertsey	2 0 8	32 4 5				
Laleham	1 2 7	33 7 2				
Staines	3 0 7	36 7 9				
London stone, the boundary of the City's jurisdiction, west of London	0 3 4	37 3 3				
					F. long *F. br.*	
Windsor	8 0 9	45 4 3		Romney	120 18	Timber
Maidenhead	6 4 1	52 0 4				
				Boulters	Ditto	Ditto
Marlow	7 4 0	59 4 0	Marlow	Marlow	Ditto	Ditto
			Temple	Temple	Ditto	Ditto
			Hurley	Hurley	Ditto	Ditto
			Hambledon	Hambledon	Ditto	Ditto
Henley	7 6 0	67 2 0				
			Marsh	Marsh	Ditto	Ditto
			Shiplake	Shiplake	Ditto	Ditto
			Sonning	Sonning	Ditto	Ditto
Kennet mouth, one mile below Reading	8 4 0	75 6 0	Caversham	Caversham	Ditto	Ditto
			Mapledurham	Mapledurham	Ditto	Ditto
Pangbourn	7 0 0	82 6 0	Whitchurch	Whitchurch	Ditto	Ditto
				Goring	Ditto	Ditto
			Cleeve	Cleeve	Ditto	Ditto
Wallingford	10 0 0	92 6 0				
			Bensington	Bensington	Ditto	Ditto
			Days	Days	Ditto	Ditto
			Sutton			
Abingdon	13 4 0	106 2 0	Abingdon	Abingdon	Ditto	Stone
			Sandford	Sandford	Ditto	Ditto
			Ilsley	Ilsley	Ditto	Ditto
			Rewley			
Oxford	8 1 0	114 3 0	Oseney	Oseney	110 14	Ditto
				Godstow	Ditto	Ditto
			Langley	Pinkell	Ditto	Ditto
			Old Harts			
			Rushey			
			Wergs			
			Duxford			
			Rushey	Rushey	Ditto	Ditto
			Old Nans			
			Clarks			
			Monk Mill			
			West and East Buscot	Buscot	Ditto	Ditto
	31 0 0			St. John's	Ditto	Ditto
		145 3 0				
And on the Kennet, between the mouth of that river and Reading		76 5 0	Blakes	Blakes	120 19	Timber

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APPENDIX. No. II.

TABLE I.—Containing the names of the Towns situated on the Banks of the Thames, with thei
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TABLE II.—Shewing the Tolls payable on the THAMES and ISIS Navigation, from Lechlade to London, and back, in each passage at the Pond-locks, and at the old Locks and Weirs; and also the Prices of Water-carriage downward and upward by the Rivers Thames and Isis, and of Land-carriage to and from the several Places undermentioned and London; and also the Time generally taken in navigating a Barge from such Places to London downward by the assistance of the Stream, and upward from London to such Places by Horse-towing.

	Tolls at the Pond-Locks, & to the city of London.			Tolls at the old Locks & Weirs.			Prices of water carriage down.			Prices of water carriage up.			Price of land carriage each way.			General time of passage down.	General time of passage up.
	Per ton each passage.			For five tons each passage.			Per ton.			Per ton			Per ton.			Days.	Days.
	£.	s.	d.	£.	s.	d.	£.	s.	d.	£.	s.	d.	£.	s.	d.		
Staines	0	0	2	0	0	0	0	5	0	0	7	0	1	0	0	1	1½
Windsor	0	0	3½	0	0	0	0	6	0	0	8	0	1	6	8	1	2
Maidenhead	0	0	3½	0	0	0	0	7	6	0	9	6	1	10	0	1¼	2½
Marlow	0	0	6½	0	0	3	0	9	0	0	11	6	2	0	0	1½	3
Henley	0	0	11	0	0	7½	0	10	6	0	13	6	2	5	0	1¾	3½
Reading	0	1	5	0	1	2½	0	12	0	0	16	0	2	10	0	2	4
Wallingford	0	1	11	0	2	10½	0	14	0	0	18	0	3	0	0	3	5
Abingdon	0	2	2	0	4	2½	0	16	6	1	3	0	3	10	0	3¼	5½
Oxford	0	2	6½	0	6	7	0	19	0	1	5	0	4	0	0	3½	6
Lechlade	0	3	3½	0	8	9½	1	10	0	2	0	0	5	0	0	5	8

APPENDIX. No. III.

An Account of the Peat-pits near Newbury, in Berkshire; in an Extract of a Letter from John Collet, M. D. to the Right Reverend Richard Lord Bishop of Ossory, F. R. S.—From the Philosophical Transactions, vol. 50.

Newbury, Dec. 2, 1756.

MY LORD,

NOW I am mentioning the peat, I beg leave to assure your lordship, that though some persons have asserted, that after the peat has been cut out, it grows again after some years, yet this is not true of the peat found here, none of the peat-pits which were formerly dug out, and have lately been opened again, affording the least reason to justify such an opinion; but, on the contrary, the marks of the long spade (with which they cut out the peat) are still plainly visible all along the sides of the pits quite down to the bottom, and are now as fresh as if made but yesterday, though cut above fifty years ago: which shews also, that our peat is of too firm a texture to be pressed together and to give way, so as to fill again the empty pits, which, perhaps, may be the case in some of the mosses where the pits are found, after some years, to be filled up again.

The town of Newbury lies north and south, in the shape of a Y, cross a valley, which valley runs east and west, and is here about a mile broad, the river Kennet

Kennet running along the middle of it. The peat is found in the middle of this valley, on each side of the river, extending in all, from between a quarter of a mile to about half a mile in breadth; and in length, along the valley, about nine miles westward, and about seven eastward; and I believe much further, though not yet discovered, and perhaps with some intermissions.

The ground it is found in is meadow land, and consists chiefly of a whitish kind of earth: under this lies what they call clob, being a peat earth compounded of clay, of a small quantity of earth, and some true peat; it is from four to eighteen inches thick, and where the earth above it is but thin, it is sometimes full of the roots, that grow on the surface of the ground; and if the meadow also be moorish, the sedge and flags will shoot their roots quite through it into the true peat, which lies directly under this clob.

The top of the true peat is found at various depths; from one foot to eight feet below the surface of the ground, and the depth or thickness of this peat is also very different, from one foot to eight or nine feet, the ground below it being very uneven, and generally a gravel.—My friend Mr. Osgood has dug two feet into this gravel, to see if any peat lay below it, but could not find any.

The truest or best peat has very little (if any) earth in it, but is a composition of wood, branches, twigs, leaves, and roots of trees, with grass, straw, plants, and weeds; and lying continually in water makes it soft and easy to be cut through with a sharp peat-spade. The colour is of a blackish brown, and if it be chewed between the teeth it is soft, and has no gritty matter in it, which the clob has. It is indeed of a different consistence in different places, some being softer, and some firmer,

firmer, and harder, which may perhaps arise from the different sorts of trees it is composed of.

To get at the peat, they first dig up the surface of the earth till they come to the clob, throwing the earth into the empty pits from which they have already cut out the peat, they then dig up the clob, and either sell it to the poor for firing, or lay it up in heaps to burn to ashes, to be sold to the farmers. They then cut out the true peat, with a peculiar kind of spade, in long pieces, vulgarly called long squares, about three inches and a half broad every way, and four feet long, if the thickness of the peat will allow that length; and as they cut it out in long pieces, they lay them in a regular order carefully in rows upon the ground, to be dried by the sun and wind. If the peat be thick, when they have cut one length of the spade for some distance, they return again, and cut down another length of it (or four feet) and so on, till they reach the gravelly bottom, if they can sufficiently drain it of the water, which continually comes in, though proper persons are employed to pump as much of the water as they can all the time. As the peat dries, and is turned by persons appointed for that purpose, to dry it the better, it breaks into smaller lengths, and then it serves not only the poor, but many other persons for firing, and gives a good heat. It is sold for about ten shillings a waggon-load, delivered at their houses in the town. The ashes also prove very good manure for both grass and arable land, and the farmers give from fourpence to sixpence per bushel for them, which renders this firing very cheap.

Great numbers of trees are plainly visible in the true peat, lying irregularly one upon another, and sometimes even cart loads of them have been taken out, and dried for firing; but the nearer these trees lie to the surface

surface of the ground, the less sound is the wood: and sometimes the small twigs, which lie at the bottom, are so firm as not to be easily cut through with the usual peat spade. These trees are generally oaks, alders, willows, and firs, besides some others not easily to be known. The small roots are generally perished, but yet have sufficient signs to shew that the trees were torn up by the roots, and were not cut down, there being no sign of the axe or saw, which, had they been felled, would have been plainly visible.

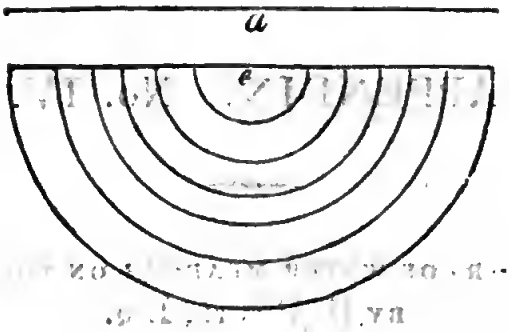
No acorns are found in the peat, though many cones of the fir trees are, and also a great number of nut-shells. They are all of a darkish colour, and the nuts are hollow within, and some of them have a hole at the broad end.

A great many horns, heads, and bones of several kinds of deer, the horns of the antelope, the heads and tusks of boars, the heads of beavers, &c. are also found in it; and I have been told that some human bones have been found; but I never saw any of these myself, though I have of all the others.

But I am assured, that all these things are generally found at the bottom of the peat, or very near it: and indeed it is always very proper to be well and faithfully informed of the exact depth and place, where any thing of these kinds is found, whether it is in the earth above the peat, or in the clob; or in the true peat, or at the bottom of it, which will greatly assist us in forming a just judgment of the real antiquity of the things that are found, or at least of the time they have lain there. Besides this, as they formerly used to cut out the peat in large plots, here and there, leaving spaces full of peat between those pits (whereas they now draw off the greatest part of the water by pumps, and

so clear out of all the peat regularly as they go on); so it must be carefully observed, whether whatsoever is found here be dug out of these old pits or not; for axes, and other things may have been formerly dropt into these pits, before they were filled up again with earth, and may now be dug out of them again. My father has now in his possession an iron hatchet, not greatly differing from the modern form, which was found lying flat at the very bottom of the peat: it was covered with a rust near half an inch thick, and the handle was to it, which seemed to be of beech wood, but was so soft that it broke in bringing it up; but as the person is dead who found it, I cannot say whether it lay in an old peat pit or no.

Mr. Osgood found, some years ago, an urn of a light brown colour, and large enough to hold above a gallon, in the true peat, about eight or ten feet from the river, near a mile and a half west of this town in Speen-moor. It lay about four feet below the level of the ground, and about one foot within the peat, and over it was raised an artificial hill, about eight feet higher than the neighbouring ground; and as the whole hill consisted of both peat and meadow ground intermixed together, it plainly appeared that the peat was older than the urn, and that the persons who raised the hill must first have dug a large hole in the peat to bury the urn there, and so formed the hill of the peat and meadow ground mixed together round the hill where the urn lay, they had also many half circular ridges, with trenches between them, one beyond another, in this manner:



Where *a* is the river, and *e* the hill; and the half circles shew some of the ridges, the number of which Mr. Osgood has now forgot. The urn was broke by the peat spade, and it came up only in small pieces, so that nothing was found in it; and nobody happened to be there at that time but the peat cutters.

No coins of any sort have been found in the peat. But there may, perhaps, be a variety of things at the bottom of it; but as the peat is always full of water, which is never drained off, so it is not an easy matter to examine the bottom.

I beg leave to assure you, my Lord, that I am, with great respect and esteem,

Your Lordship's much obliged,
and obedient humble servant,
JOHN COLLETT.

APPENDIX.

APPENDIX. No. IV.

PARTICULARS OF WATER MEADOWS ON THE KENNET. BY H. HOYTE, ESQ.

DEAR SIR, *Speen, June* 9, 1808.

YOU will think me extremely negligent in not communicating sooner to you the information I promised relative to the irrigated lands by the side of the Kennet, leading from Hungerford to Reading, in the procuring of which, I can assure you, I met much difficulty in gaining the information I now transmit you, and am sorry to add I cannot be responsible for its being quite correct, but I trust it is nearly so. I am, most respectfully, Sir,

Your most obedient servant,
HENRY HOYTE.

	Quantity of Acres.	Stratum.	Where cut out for peat, and where not cut out.	Quality.	Observations.
In Hungerford and Denford	70	Part gravel, do. peat	Not cut out	Middling	
Avington	60	Chiefly peat	Ditto	Better	
Kintbury	400	Gravel	Ditto	Very good	
Hempstead	100	Gravel & peat	Cut out	Indifferent	
Speen and Newbury		Peat chiefly	Ditto	Ditto	
Thatcham parish	12	Ditto	Not cut out	Middling	
Do. continued	80	Ditto	Cut out	Bad	
Do. Do.	70	Ditto	Not cut out	Middling	Midgham marsh imperfectly watered, consequently capable of improvement.
Do. Do.	50	Ditto	Cut out	Bad	
Do. Do.	100	Ditto	Not cut	Good	
Midgham marsh	70	Chiefly gravel	Ditto	Middling	
In Midgham	100	Ditto	Ditto	Tolerable	
In Aldermarston and Beenham	120	Gravel	Ditto	Very good	

Observation on this last, (viz.) Aldermarston and Beenham:—This lies between the navigable canal and the old river, near Aldermarston; the best watered, and the best quality of any one on the level from Newbury to Reading; and if there was no mill at Aldermarston, two hundred acres more might be irrigated, and, being on a gravel bottom, are capable of being made very valuable.

	Quantity of Acres.	Stratum.	Cut out or not.	Observations.
Ufton	80	Gravel	Not cut	This was formerly called Ufton lot mead, and since the inclosure made water meadow, and considerably improved.
Ditto	50	Ditto	Ditto	These 50 acres in Ufton were old water mead, tolerably good.
Sulhampstead	20	Ditto	Ditto	This very good.
Ditto	50	Ditto	Ditto	This is scattered in different places, and is tolerably good.
From thence to Reading	100	Gravel & peat	Ditto	In general of a very inferior quality owing to the want of drainage, of which there is great capability.

The best water meads for the spring feed only, are let from one guinea and a half to two guineas and a half per acre, exclusive of the profit arising from the fold, which is estimated at half a guinea per acre more. What I allude to in the fold, is the person who hires the eatage is confined at nights to fold on such part of the arable lands of the latter as are agreed upon by him and the person who engages the same.

The spring feeding commences at old Lady Day, and ceases at old May Day.

Mown

Mown once, afterwards produce from one ton and a half to two tons per acre; but there are some who consider it still more profitable to cut part thereof for cart horses.

The after-feed will rot sheep, consequently takes from the value of the catage.

APPENDIX. No. V.

ON TRANSPLANTING SWEDISH TURNIPS. BY A BERKSHIRE AGRICULTURIST.

HAVING succeeded in an experiment I made in planting out Swedish turnips, I am desirous of making it public, that all farmers, who are interested in a turnip crop, may take advantage of the plan I have adopted, and which, I have no doubt, may be practised with certain success.

The fly was very active and very destructive to the turnips during the months of June and July, 1807. And those persons, who were not fortunate in early sowing, had thin and partial crops; and in many instances there was a total failure. Indeed I have seldom witnessed any season, when the turnip crop has not been more or less ruined by the ravages of the fly; many places being frequently too thinly planted, and others quite bare. In this case, I have sent women and children to pull the plants, in places where they were too thick, and dibble them in where they were too thin, and where the seed had failed; and have found the plants so dibbled, as good in all respects as any others in the field.

It was this observation led me to adopt the experiment I made; and which, I have reason to think, will render

render late Swedish turnip crops certain, and attended with little expence.

Having sown a field with Swedish turnips three times, I at last succeeded in the end of July, and the plants were in rough leaf the second week in August; but being fearful, from the general opinion, that this crop would turn to little account, I immediately ordered two strips of pea stubble to be plowed up, and directed the women and children to go into a field, which was sown early with Swedish turnips, (and were a tolerable good plant in July) to draw all the plants they could, leaving the field well covered. The plants drawn were generally about the size of a walnut. I directed two children to follow every third furrow of the plough, and lay down plants along the furrow, at about six or eight inches apart; some women and children followed, and with a planting stick, set the plants in the furrow.

My object in following the plough, was to take advantage of the moisture of the fresh-turned ground; and I chose the third furrow, that the swing plough might pass between, and ridge them up, as is very generally practised with potatoes.

On the 10th of August we began transplanting, the weather was very hot and sultry, but occasional showers. The first week in September the swing plough ridged them up. Not a single plant has failed, and there is as abundant a crop, and as good, as in the piece from whence the plants were taken.

Having succeeded in obtaining a valuable crop of Swedish turnips, contrary to the opinion of every person I conversed with upon the subject, I wish the system to be applied in the most useful manner, which I conceive may be as follows:—Suppose one or more acres

to

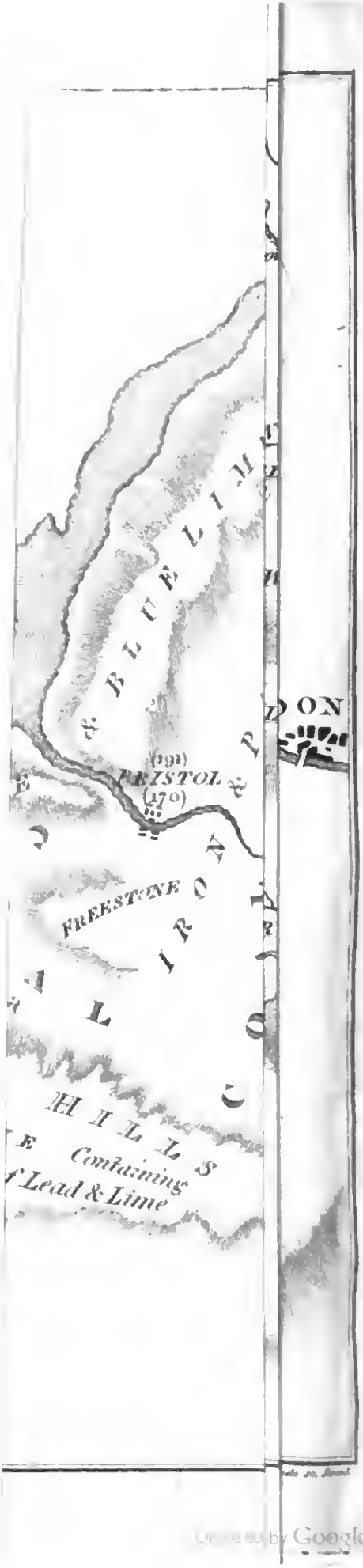
to be well prepared and manured, and the seed sown in May, or first week of June, a plentiful plant may be expected. And these plants will be strong, and of good size to move, any time the last fortnight in July; by which time, rye, vetches, or winter barley, is generally fed off, and the land prepared for turnips. Should the weather be unfavorable for sowing turnip seed at this time, these stubbles may be planted as above, with the certain prospect of a good crop. But my object is to pursue the system through August and beginning of September, following the plough upon the pea, bean, and wheat stubbles; and an abundant produce may be expected to support sheep, cattle, or pigs, throughout the following spring. If the third furrow is planted, the cost will be under eight shillings an acre, and the swing plough passing between the plants, saves all expence of hoeing. And it is my intention, in future, to turn the furrow upon the plants.

There may be unforeseen objections to this system, of which I am not aware, and which experience may discover; but the objections I have hitherto met with are completely removed: by following the furrow fresh turned up, and putting in your plants as soon after they are drawn as possible, they are almost certain to strike and flourish, and come to large heads. And I have observed that the plants about the size of a walnut have proved better, and taken sooner than smaller plants. Should the weather be particularly unfavorable, a tub of earth and water to dip the plants in, at the time of planting, will be found useful.

The Swedish turnip seems to me, to have an advantage over any other turnip as yet introduced. In May, 1807, my Swedish turnips lasted longer than I expected, so long, that I kept my ewes and lambs upon them till

the

the last week in May: for the last fortnight, I loosened the turnips from the ground, to check their growth and prevent them running to seed; and let the lambs forward to crop the greens. Being desirous of sowing barley and grass seeds in this field, and having a large piece left, I pulled them up and carted them away. These turnips lasted sound, and the sheep eat them heartily in July; and I have no doubt the turnip would have continued wholesome and nourishing food, through the month of August.



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APPENDIX. No. VI.

BY FREDERICK PAGE, ESQ.

EXPLANATION OF THE MAP OF THE STRATA, AND OF THE DIFFERENT LINES OF INLAND NAVIGATION, BETWEEN LONDON AND BRISTOL.

THE county of Berks is nearly in the centre of the annexed sketch, and its political boundaries are marked with faint lines. The three leading natural and popular divisions of the county are:

1st. Vale, bounded *north and east* by the Thames.
South by the Ridge Way, from Streatley to Ashbury; and
West by an imaginary line which forms its real political boundary on the Wiltshire side.

2nd. Hill, bounded *north* by the Ridge Way as above.
East by the northward direction of the river Kennet, across the narrowest part of the county near Reading.
South by Hampshire.
West by Wiltshire.

3rd. Forest, bounded *west*, *north*, and *east* by the circuitous windings of the Thames, and *south* by Surrey.

The leading stratifications of the *Vale*, are rag-stone, clay, and lime-stone; of the *Hill*, chalk with more or less loamy gravel superincumbent, the gravel being a length lost in the valleys accompanying the river which are depositions of alluvial matter, peat, &c. A very small district in the south-eastern corner of this division is a strong clay. The northern part of the *Forest* division is chalky, similar to the hill country, and the southern sand and gravel, rarely clay. The course of all the rivers in the county, and the general inclination of it mediately or immediately, is towards the Thames.

All the market towns in Berkshire are distinguished by a line under them thus, WINDSOR; and the distances by water in miles from London of all those situate on the Thames, or on the line of the Kennet and Avon, or Wilts and Berks canal, are marked under their names thus, DEVIZES.
(131)

N. B. Navigable rivers are coloured *blue*.

Navigable canals for which acts of parliament have been obtained, and which have been executed or are now executing, *red*.

Canals proposed or suggested in the Memoir on Inland Navigation, *yellow*.

The stratification of the western part of the map is noticed generally in letters on it, and the general scarping of the hills is attempted to be distinguished by the shading.

The mineral basin, extending and embracing in a triangular form from Stroud to Frome, and from . . . . . thence to the eastern bank of the Severn, the great deposit of coal, from whence the Wilts

and Berks canal, and the Kennet and Avon canal, are expected to supply the county of Berks with that necessary article, is meant to be a principal feature in that part of the annexed sketch.

The walls of this basin are lime-stone of various descriptions, the strata which lie over the coal are paving and iron stone.

The coal itself is divided into three well known distinctions, and are so noticed in the map. 1. *Glostershire coal*, which comprehends all those collieries north of the Bath Avon. 2. *Somersetshire*, all those south-east of that river; and 3. *Nailsea*, or *Bedminster*, those to the south-west. On the western side of the Severn are noticed the two branches of the Monmouthshire canal, which unite at Newport; because coal shipped from that place not being liable to the duties on coals carried coastwise: it enters into competition with the other coal for the consumption of Berkshire and the eastern counties.

For a detailed account of this great bed of coal, reference may be had to a most valuable paper by Mr. E. Martin, in the Philosophical Transactions for 1806, Part II. No. 17.

The elevations above the sea of the summit levels of the several canals, which communicate with the Thames, and the length of the summits, are annexed.

	Length of summit in miles.	Elevation above the sea in feet.
Kennet and Avon	1¼	434
Thames and Severn	2½	
Oxford Canal	11	393¼
Grand Junction	8¼ / 4¼	395 / 375
Wilts and Berks	8	806
Basingstoke	22	263

The figures *over* the cities of Bristol and Bath, showing their respective distances from London by water, by the Wilts and Berks line; and the figures under by the Kennet and Avon line.

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——— Mazagan.
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Burnet.

Cabbage. Gibbs' true drumhead, for cattle.
——— Thousand headed.
——— Scotch.
——— American.
——— Large red.
——— Long-sided.
——— White turnip above ground.
——— Purple, ditto ditto, or kohl rabi.
——— White turnip under ground.
——— Tall green borecole.
——— Tall purple ditto.
——— Siberian hardy sprouting.
Carrot. Large thick orange, for cattle
——— Large thick red, ditto.
Canary.
Chicory.
Clover. Common red.
——— Perennial, orcow-grass.
——— White Dutch.
Clover. Yellow, trefoil, nonsuch, or black-grass.
——— Malta.
——— Providential.
Flax, or linseed.
Furze.
Grass. Meadow foxtail,
——— Meadow fescue.
——— Sheep's fescue.
——— Hardish fescue.
——— Purple ditto.
——— Float ditto.
——— Crested dogstail,
——— Rough cocksfoot.
——— Tall oat-grass.
——— Yellow ditto.
——— Meadow ditto.
——— Sweet vernal.
——— Great meadow.
——— Common ditto.
——— Marsh ditto.
——— Compressed ditto.
——— Annual ditto.
——— Common ray-grass.
——— Peacey ditto.
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——— Yorkshire.
With many other sorts.

Hemp. Russian.
——— English.
Honeysuckle. French.
Lettuce. Large Coss.
Lentils. Small.

Lentils. Large.
Lucerne.

Mangel wurzel.
Maw-seed.
Medicago, various sorts.
Millet. Red.
——— White.
Mustard. Brown.

Oats. Early Essex.
——— Dutch brew.
——— Tartarian.
——— Poland.
——— Potatoe.
——— Flanders.
——— Caspian.
——— Black.

Parsley. Plain.
Parsnip. Large thick.
Pea. Marlborough grey.
——— Large grey rouncival.
——— Early white.
——— White boiling.
——— Pearl.
——— Blue Prussian.
——— Maple.

Potatoes. Ox-noble.
——— Late champion.
——— Large red.
——— Nicholson seedling.
——— Bomb-shell.

Rib-grass. Lambs-tongue, or
——— Upright plantain.
Rape, or coleseed.
Rye.

Sainfoin.
Saridella.

Tares. Spring.
——— Winter.
——— White.
——— Perennial.
Trefoil. Birdsfoot.
——— Common, various sorts.
Turnip. Early stone.
——— White Norfolk.
——— Norfolk bell.
——— Stubble.

Turnip. Green top.
——— Red-top.
——— Large yellow.
——— Globe.
——— White tankard.
——— Green ditto.
——— Red-top ditto.
——— Large Dutch.
——— True yellow Swedish, or ruta baga.
——— White Swedish.

Vetch. Kidney.
——— Chickling.
——— Pale-flowered.
——— Everlasting.
——— Great wood.
——— Six-flowered.
——— Tufted.
——— Bush.
——— Hoary.
——— Sainfoin.
——— Red-flowered.
——— Biennial.
——— Bastard.
——— Broad-podded.
——— Rough.
——— Single-flowered.
——— Narbonne.
——— Flat-podded.
——— Hairy ditto.
——— Narrow-leaved.
——— Streaked.
——— White-flowered.
——— White-seeded.
——— Horse-shoe.
——— Milk.
——— Liquorice.

Weld.
Wheat. Red Lammas.
——— Common white.
——— White hedge.
——— White Siberian.
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